CallPilot

Installation and Configuration

Part 3: Meridian 1 Switch Setup and CallPilot Server Configuration

NORTEL
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CallPilot

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Publication history

Contents

Chapter 1

Switch programming and call routing overview

In this chapter

Overview

Introduction

This guide describes the switch setup and CallPilot server configuration steps of the CallPilot installation. This includes the following:

- CallPilot-specific switch programming steps on the switch

- connecting CallPilot to the switch and to the CLAN

- CallPilot server configuration; this includes running the Configuration Wizard

Worksheets

Before you begin the installation, prepare the worksheets provided in
Part 1: Installation Flowchart and Worksheets.

High-level installation procedures

Refer to *Part 1: Installation Flowchart and Worksheets* for high-level procedures for the following:

- installing a new CallPilot system (that is, installing a CallPilot server that has arrived from the factory with the expected preloaded software)

- upgrading the CallPilot software

- installing the operating system and CallPilot server software for recovery purposes

Glossary and related information products

Refer to *Part 1: Installation Flowchart and Worksheets* for the glossary and the list of related information products.

Installation flowcharts

CallPilot installation steps for Part 3 for 200i and 201i servers
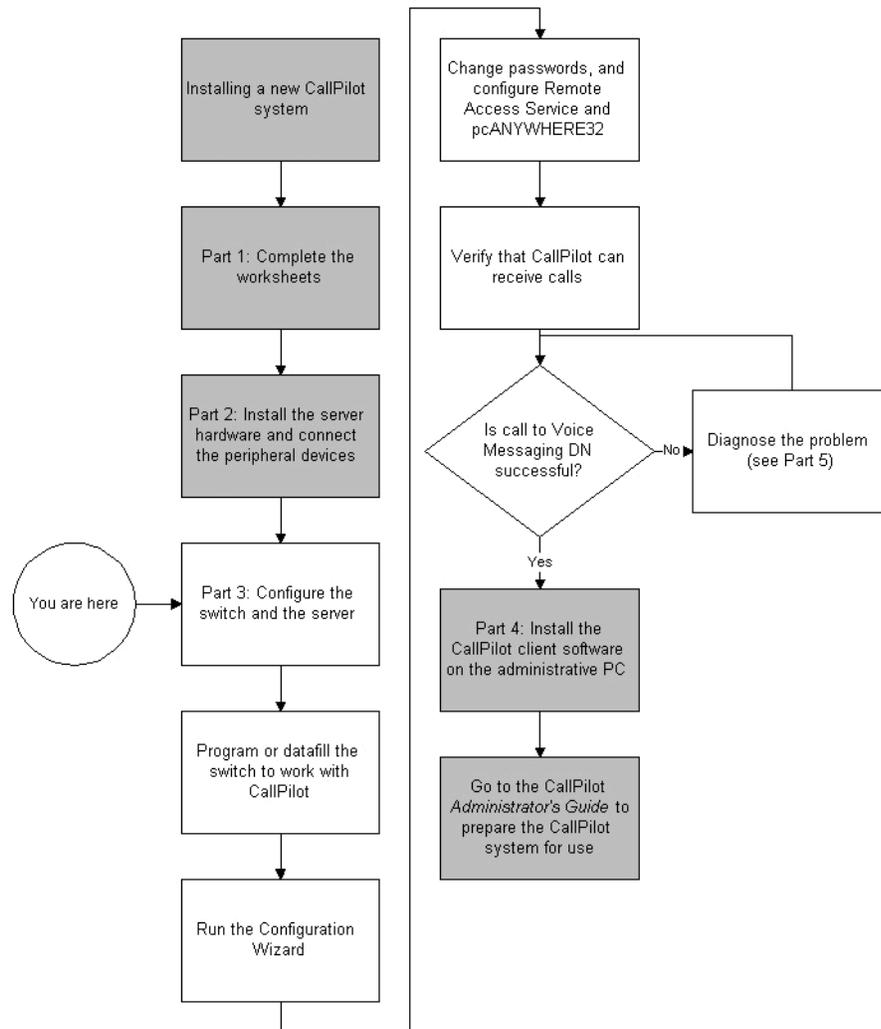
Where to start?

If you need a high-level overview of the switch programming, then read the remainder of this chapter. Otherwise, for the 200i or 201i server, start at Chapter 3, "Switch programming," on page 35, and skip Chapters 2, 4, and 5 of this guide.

CallPilot installation steps for Part 3 for tower and rackmount servers

```
┌────────────────────────┐              ┌────────────────────────┐
│ Installing a new        │              │ Run the Configuration  │
│ CallPilot system        │              │ Wizard                 │
└────────────────────────┘              └────────────────────────┘
            │                                        │
            ▼                                        ▼
┌────────────────────────┐              ┌────────────────────────┐
│ Part 1: Complete the    │              │ Change passwords, and   │
│ worksheets              │              │ configure Remote        │
└────────────────────────┘              │ Access Service and      │
            │                            │ pcANYWHERE32            │
            ▼                            └────────────────────────┘
┌────────────────────────┐                          │
│ Part 2: Install the     │                          ▼
│ server hardware and     │              ┌────────────────────────┐
│ connect the peripheral  │              │ Verify that CallPilot   │
│ devices                 │              │ can receive calls       │
└────────────────────────┘              └────────────────────────┘
            │                                        │
            ▼                                        ▼
 ┌────────────┐  ┌───────────────────┐      ◇ Is call to Voice         ┌────────────────────────┐
 │ You are    │─▶│ Part 3: Configure │      Messaging DN ──── No ─────▶│ Diagnose the problem   │
 │ here       │  │ the switch and    │      successful?                │ (see Part 5)           │
 └────────────┘  │ the server        │         │                       └────────────────────────┘
                 └───────────────────┘        Yes
                          │                     │
                          ▼                     ▼
        ┌────────────────────────┐    ┌────────────────────────┐
        │ Install line cards in   │    │ Part 4: Install the     │
        │ the switch, or install  │    │ CallPilot client        │
        │ a channel bank if       │    │ software on the         │
        │ applicable to your      │    │ administrative PC       │
        │ switch                  │    └────────────────────────┘
        └────────────────────────┘               │
                          │                       ▼
                          ▼            ┌────────────────────────┐
        ┌────────────────────────┐    │ Go to the CallPilot     │
        │ Program or datafill the │    │ Administrator's Guide   │
        │ switch to work with     │    │ to prepare the CallPilot│
        │ CallPilot               │    │ system for use          │
        └────────────────────────┘    └────────────────────────┘
                          │
                          ▼
        ┌────────────────────────┐
        │ Connect the CallPilot   │
        │ server to the switch    │
        └────────────────────────┘
```

Where to start?

If you need a high-level overview of the switch programming, then read the remainder of this chapter. Otherwise, the installation steps begin at Chapter 2, "Installing the MGate card," on page 29. Complete the steps in one chapter before continuing to the next chapter.

Understanding the interaction between the switch and the CallPilot system

Example for 200i and 201i servers

The 200i or 201i server is inserted into a card slot in the Meridian 1 switch, and the MGate card is not used.
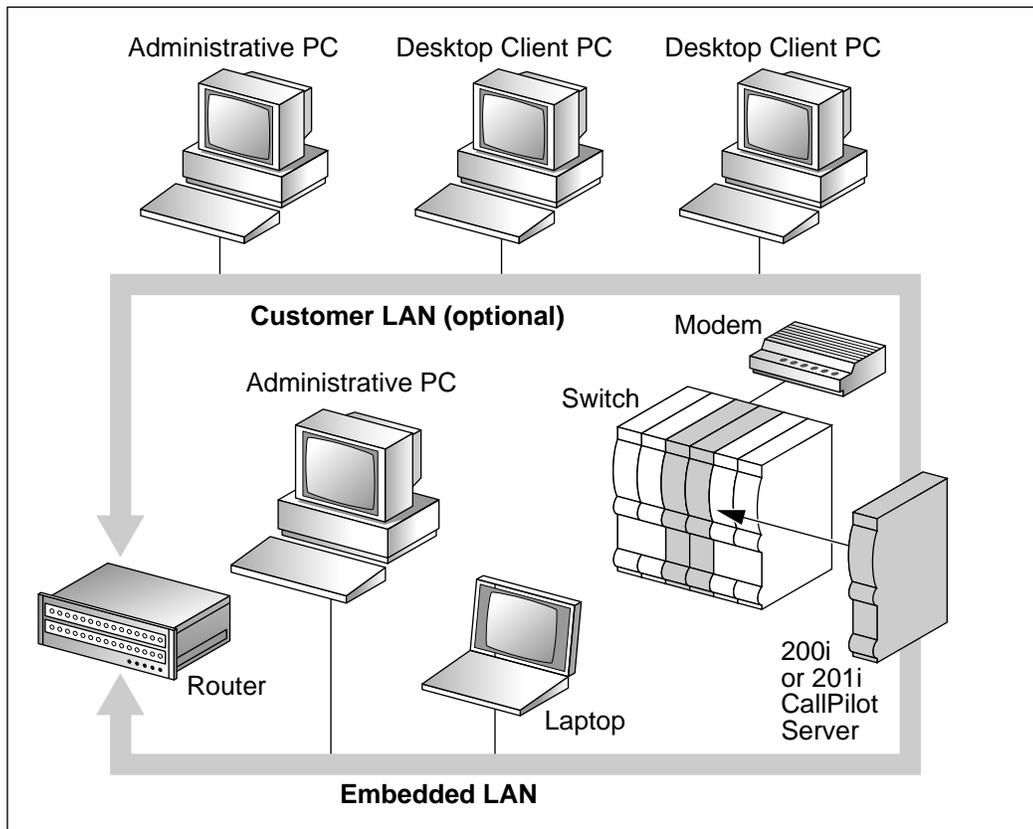
G100894

Example for tower and rackmount servers

This diagram shows a typical tower server configuration. You can use the same configuration for a rackmount server.
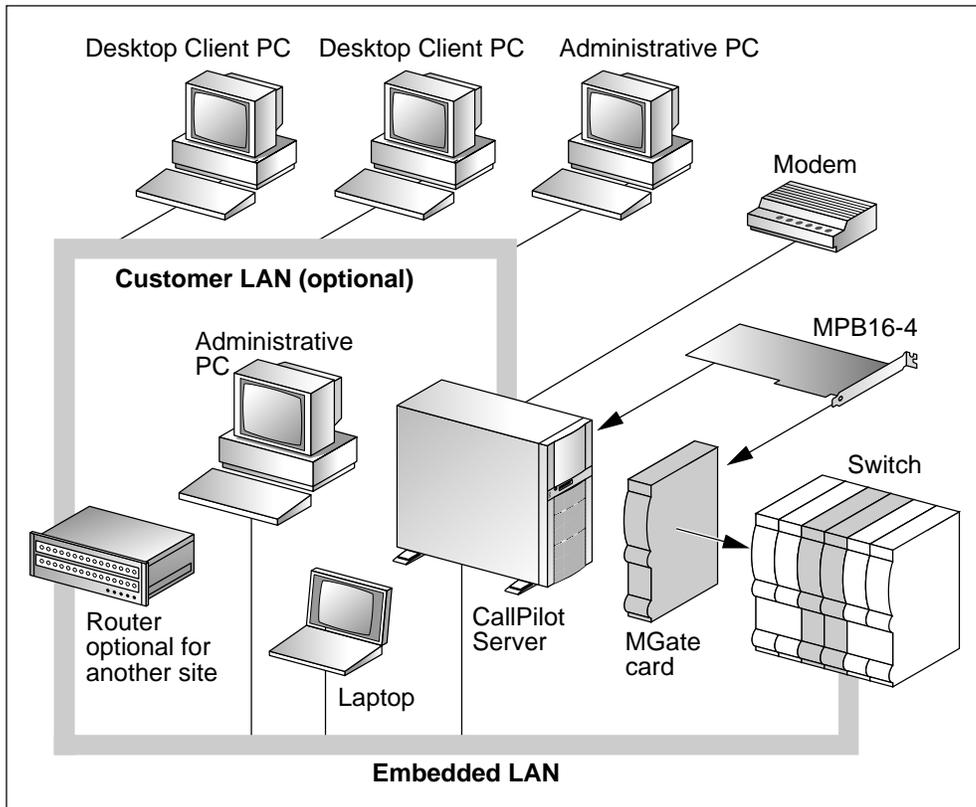
Components

CallPilot server
The CallPilot server connects to the switch, the administrative PC, and, where Desktop Messaging is enabled, the Customer LAN (CLAN).

MGate card
The MGate card is a line card that is installed in the switch. The MGate card sends the voice and data signals to the MPB16-4 boards in the CallPilot server.

Note: The 200i and 201i CallPilot servers do not use an MGate card.

MPB16-4 board
The MPC-8 cards that reside in the MPB16-4 board process the voice and data signals that arrive from the switch.

An MPB16-4 board has two integrated MPC-8 cards and four bays for additional optional MPC-8 cards.

Each CallPilot server ships with at least one MPB16-4 board.

Note: The 200i and 201i CallPilot servers do not use an MPB16-4 board. The 200i and 201i CallPilot servers have an integrated MPC-8 card and slots for additional optional MPC-8 cards.

Administrative PC

CallPilot client software is installed on a PC that runs Windows 95, Windows 98, or Windows NT Workstation. The administrative PC provides

- administrative ability for the switch, server, and CallPilot software
- access to CallPilot operational measurement reports
- the ability to develop multimedia applications with both voice and fax functionality

You can connect an administrative PC directly to the server, remotely through a modem, or via a connection to the CLAN or ELAN.

Modem

The server connects to a modem to allow remote access by a support PC for installation, maintenance, and diagnostics.

Desktop client PCs

You can install Desktop client messaging software on client PCs to enable mailbox users to receive phone, fax, and voice mail on their PCs. Refer to the *Desktop Messaging Software Installation and Maintenance Guide*.

Multimedia channels in the CallPilot server

Multimedia Processing Units

Calls that come in to CallPilot need processing power to support the fax and speech recognition features, as well as the basic voice features. This processing power is provided by Multimedia Processing Units (MPUs) in the CallPilot server. The MPB16-4 board and the MPC-8 cards in the CallPilot server provide the MPUs.

Types of multimedia channels

Different CallPilot services deal with different types of media, and certain types of media need more channel resources to process them. As a result, three types of multimedia channels handle the various types of CallPilot services.

Each type of channel terminates on a different number of MPUs, based on how much processing power is required. For example, integrated fax and voice data takes twice as much processing power as voice-only media. A fax channel, therefore, terminates on two MPUs.

Channel type	Description	# of MPUs
Voice	One voice channel requires one MPU.	1 MPU
Fax	Fax needs twice as much processing power as voice-only media, and, therefore, requires two MPUs for one fax channel.	2 MPUs
ASR (speech recognition)	Speech recognition needs four times as much processing power as voice-only media, and, therefore, requires four MPUs for one speech recognition channel.	4 MPUs

The remainder of this chapter describes how different switches interact with CallPilot.

Overview of switch and server configuration

Introduction

The later chapters provide detailed instructions for switch programming and server configuration. The following table summarizes the steps that relate to switch programming:

On the Meridian 1	On the server
Create one ACD agent queue to hold all agents that service CallPilot.	Enter the TNs that are configured on the switch in the Configuration Wizard.
Create two CDN queues—a primary CDN for voice messaging and a secondary CDN for multimedia messaging.	Enter the CDN for Voice Messaging in the Configuration Wizard.
Create a phantom DN or dummy ACD DN for each service that needs to be directly dialable.	Use the CDNs, phantom DNs, and dummy ACD DNs to set up services in the Service Directory Number (SDN) Table.

Components of call routing for Meridian 1 switches

Automatic Call Distribution

Automatic Call Distribution (ACD) is a feature on the Meridian 1 that allows a number of programmed phonesets, known as ACD agents, to share equally in answering incoming calls. In the case of CallPilot, the call-queuing capability of ACD is not used, but the call-handling capability of ACD agents is used.

All channels for CallPilot on the switch are defined as agents of a single ACD queue.

How CallPilot uses ACD virtual agents

All ACD agents that service CallPilot are put into a single ACD agent grouping. These agents correspond to DS0 channels on the CallPilot server. Agents are programmed in overlay 11 as 2008 Digital (Aries) sets with Multimedia Messaging Allowed (MMA) class of service. These are not, however, physical phonesets. These are Terminal Numbers (TNs) that are programmed to look like real digital sets to the switch.

Control Directory Number

For CallPilot, you configure one Control Directory Number (CDN) on the switch for each of the following services:

- a primary CDN for Voice Messaging
- a secondary CDN for Multimedia Messaging

A CDN queue is like an ACD queue. The key difference is that calls in the CDN queue are managed by CallPilot, while calls in an ACD queue are managed by the Meridian 1.

Calls are routed to the CDN queue directly or by terminating on a phantom DN or dummy ACD queue, which is forwarded to the CDN.

How CallPilot uses CDNs

Normally, a CDN operates in control mode. In control mode, call treatment and call routing are under the control of the CallPilot server. The switch simply provides routing to CallPilot. The server specifies the type of default treatment to be given to waiting calls. It processes the calls on a first-come, first-served basis and determines to which DS0 channel the call is routed. DS0 channels are configured as agents of an ACD queue.

A CDN can also operate in default mode (that is, CallPilot is offline or the AML is down). In default mode, the switch takes over call routing control. Incoming calls receive default treatment provided by the default ACD DN associated with the CDN.

Call queuing

Incoming calls to the CDN are queued in the order of arrival. If calls cannot be processed immediately and must wait in the queue until resources are available, the first caller in the queue is handled first.

Call routing

The CallPilot server determines which DS0 channel can provide the dialed service requested by a waiting call and instructs the switch to route the call to the associated ACD agent.

See also

- "Phantom DNs" on page 20
- "SDN Table and Service Directory Numbers" on page 22

Phantom DNs

What is a phantom DN?

Instead of using phonesets or dummy ACD DNs to route calls, CallPilot can use "virtual telephones" that exist only in software and have no associated hardware. The DN associated with one of these phantom phones is called a phantom DN.

Creating a Phantom DN

To create a phantom DN, you first create a phantom loop and then define a TN within that loop. The system knows that any TN defined within that loop is a phantom TN. Each phantom TN is assigned a DN (the phantom DN). This DN becomes a service's dialable number by entering it in the SDN Table in CallPilot.

Phantom DNs forward to a CDN queue

Incoming calls cannot queue up in the phantom TN as they arrive. As soon as a call arrives at a phantom DN, the system forwards it to a CDN queue before it is routed to a multimedia channel for further call handling. However, the system remembers the phantom DN to keep track of the requested service.

Services that should use phantom DNs

Nortel Networks strongly recommends that you use either phantom DNs or dummy ACD DNs (see "Configuring dummy ACD DNs" on page 58) for the following services:

- all services created with Application Builder that are directly dialable by callers
- Speech Activated Messaging
- Paced Speech Messaging
- Voice Item Maintenance
- Fax Item Maintenance
- Express Voice Messaging
- Express Fax Messaging

Networking services

The following Networking services can either have a unique phantom DN configured on the switch, or they can share the phantom DN (and SDN) of another service:

- Enterprise Networking
- AMIS Networking
- Integrated AMIS Networking

Share DNs when your supply of available DNs on the switch is low. Create a unique DN when you need to closely monitor each service (for example, so that each service generates its own traffic data in Reporter).

Note: After you configure the SDN in CallPilot, specify with which service you are sharing the SDN.

Example

You are ready to put a new menu application into service. Phantom DN 6120 is available on the switch. In the SDN Table, you enter 6120 as the SDN for this service. This is the number that callers dial to access the menu.

SDN Table and Service Directory Numbers

Introduction

When a call arrives at a CDN queue either directly or indirectly from a phantom DN or dummy ACD DN, the switch gives the caller ringback treatment. While this happens, the dialed DN is looked up in the SDN Table in CallPilot to determine what service is required.

What is the SDN Table?

The SDN Table is where you enter the CDNs, phantom DNs, or dummy ACD DNs that have been configured on the switch for your CallPilot services. In this table, the DN (now called an SDN) is associated with a specific service. The SDN Table is administered from the CallPilot Administration Client on the administrative PC.

What the SDN table controls
In addition to specifying which service should be activated when a number is dialed, the SDN configuration also controls

- the type of channel the service acquires (voice, fax, or speech recognition)
- the number of channels allocated to the service

  The SDN configuration determines the minimum number of channels guaranteed to a service for simultaneous use and the maximum number of channels that you can use at one time.

- the session behavior for certain services, such as those created with Application Builder (including the maximum session length and a number of fax options)

Types of SDNs

There are two types of SDNs—inbound SDNs and outbound SDNs.

Inbound SDNs require DNs on the switch
Services that callers dial up need inbound SDNs. An inbound SDN corresponds to either a CDN, a phantom DN, or a dummy ACD DN on the switch, since callers must be able to dial in to the switch with a unique number.

Outbound SDNs do not need DNs on the switch

Callers do not dial outbound SDNs. The system uses outbound SDNs to place outbound calls. Since outbound SDNs do not accept incoming calls, a corresponding CDN, phantom DN, or dummy ACD DN is unnecessary on the switch.

The following services use outbound SDNs:

- outcalling services (Remote Notification, Delivery to Telephone, Delivery to Fax)
- networking services (AMIS and Enterprise)

Understanding call routing

Introduction

The switch accepts incoming calls, queues them, and routes them to the appropriate CallPilot services. Therefore, it is important to understand how call routing works so that you configure your switch properly to support CallPilot.

Call flow example

ATTENTION The example below uses a phantom DN. The same call flow occurs when a caller dials a dummy ACD DN.

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Example use of phantom DNs or dummy ACD DNs

| ATTENTION | The example below uses phantom DNs. The same call flow occurs when a caller dials a dummy ACD DN. |

Two CDN queues have been configured:

- Voice Messaging (6030)
- Multimedia Messaging (6050)

Two phantom DNs have been configured (the same scenario applies if these are set up as dummy ACD DNs):

- 6090 is the DN for a menu service (without fax items)
- 6095 is the DN for Fax Item Maintenance

In this example, when the calls come in to the switch, there are no available channels and the calls are queued as a result.

What happens when services are dialed up

1. A caller dials 6090 to access a menu service. This phantom DN forwards to CDN 6030 because the menu contains no fax or speech recognition capability.

2. Another caller dials 6095 to access the Fax Item Maintenance service. The call is forwarded to CDN 6050.

3. CallPilot looks up the DNs in the SDN Table on the server to check which service is being requested, the media type required, and the channel allocations for each service.

4.   Call 1, to the menu service that contains only voice functions (no fax items), is routed to an ACD agent that is available to handle voice.

5.   Call 2, to the Fax Item Maintenance service, is routed to an ACD agent that is available to handle fax.

How multimedia channels are acquired by callers

Introduction

The system uses the information gathered from the SDN configuration to check the ACD agent queue to see if there is an idle multimedia channel of the type required by the service.

What happens if no channels are idle

If there is an idle channel (of the needed media type), the system passes the call to CallPilot.

If there are no idle channels that meet the requirements defined in the SDN Table, the call remains in the CDN queue and the system applies a delay treatment.

The default delay treatment

The server specifies a default delay treatment of ringback. This means that while a call waits in a queue, the caller hears the phone ringing.

The call is answered

Once a multimedia channel of the appropriate type becomes idle, the call arrives at the multimedia channel and is passed to CallPilot.

Since the SDN Table has already been checked, the requested service is known and is activated at this point. The service also answers the call.

Based on which service is activated, one of the following results happens:

- The appropriate prompt is played.
- CallPilot receives a fax.
- CallPilot records a message.

The call is dropped

Once CallPilot or the caller drops the call, the multimedia channel returns to an idle state, ready to be acquired by another call.

What's next?

For 200i or 201i servers, continue with Chapter 3, "Switch programming," on page 35.

For tower or rackmount servers, continue with Chapter 2, "Installing the MGate card," on page 29.

Chapter 2

Installing the MGate card

In this chapter

About the MGate card

Introduction

| ATTENTION | An MGate card is not used with 200i or 201i servers. |

The MGate card is installed in the PBX switch that provides call data to the CallPilot server. DS30X cables connected to the switch carry voice, fax, or speech recognition data to the server.

Supported hardware

MGate card	MPB16-4 board	DS30X cable
NTRHB18CA	NTRH20BA	■ Single cable (NTRH2012) ■ Double cable (NTRH2013)

CAUTION

Risk of data loss

The MGate card is shipped from the factory with the appropriate MPB16-4 board and DS30X cables.

Do not substitute other versions of these boards and cables in the configurations specified in this documentation, as this can result in data loss.

The number of channels supported

Each MGate card supports 32 channels. The number of channels supported is the same, regardless of the type of call data (fax or voice).

You must install a second MGate card if more than 32 channels are required on the system. You must install a third MGate card if more than 64 channels are required on the system.

Installing the MGate card

The MGate card

The following photograph of an MGate card shows the location of the DIP switches:
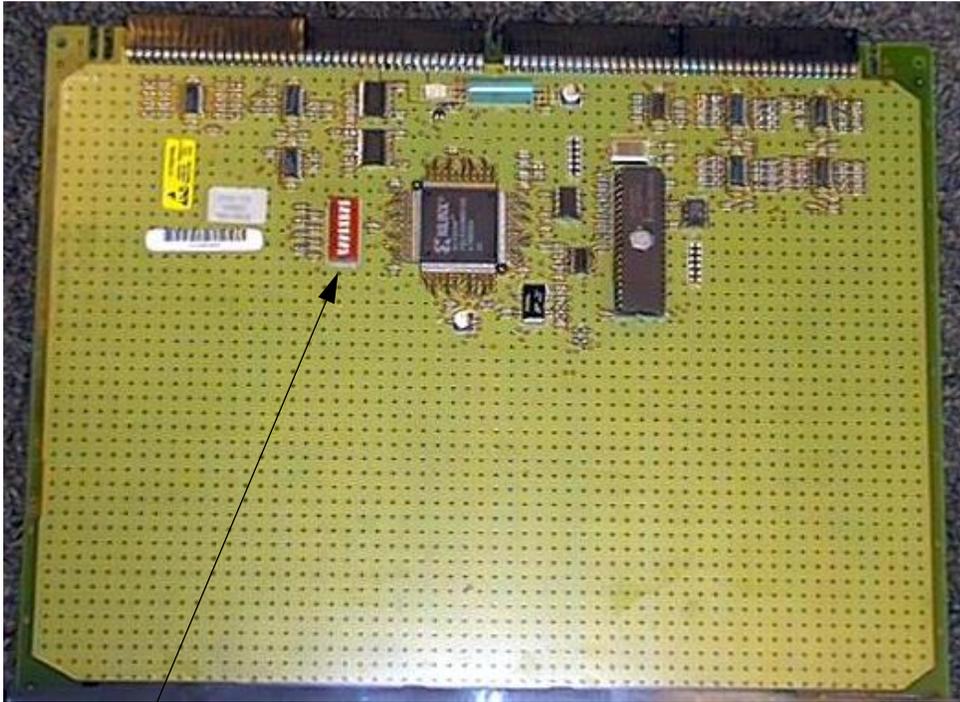
DIP Switches

To install the MGate card

Note: You do not need to power down the switch for this procedure as the MGate card is hot-swappable.

1   Remove the switch cover front panel to expose the shelf slots.

2   Remove the MGate card from its protective sleeve.

3   Set the DIP switches on the MGate card as shown in the following table. These DIP switch settings are used for all MGate cards and all system configurations:

	1	2	3	4	5	6	7	8
ON	X	X	X				X	
OFF				X	X	X		X

4   Press and pull the top and bottom latches on the MGate card outward to open the latches for installation of the card. A hook on the bottom of the latch must clear a small pin to open.

5   Slide the MGate card into the assigned slot on the switch.

6   Ensure that the slot you choose is consistent with the switch programming (for example, the slot identified in the TN configurations).

Note: You can place MGate cards in any slot on any shelf in Option 11C, Option 61C, and Option 81C switches that possess 24-tip and ring pair wiring connections to the I/O connector panel.

Slots that possess 16-tip and ring pair wiring connections require a cable kit extension to be used with MGate cards. (Sixteen-tip and ring pair wiring is present on older vintage 8D37 backplanes.)

It is *not* required that cards be placed adjacent to one another within a single shelf/cabinet. It is *not* required that all cards be placed within a single common shelf/cabinet.

To determine whether a slot possesses 16- or 24-tip and ring pair wiring, refer to *Meridian 1, System Installation and Maintenance Guide* (P0868059).

7   Press the latches to close them, locking the card into position.

8   View the status of the LED indicators to ensure that the card is software-enabled (Red LED is OFF), and the card is operational (Green LED is ON).

LED indicators

The MGate card has red and green LED indicators on the faceplate of the MGate card.
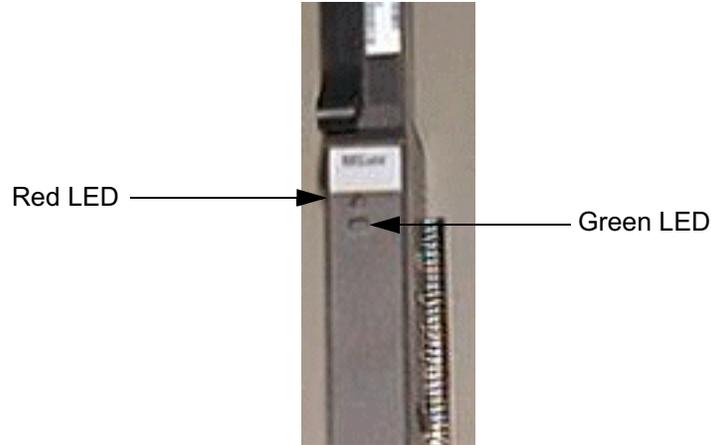
Red LED ——————————→   ←—————— Green LED

Combined LED states

The combined state of the red and green LEDs provides the important indicator.

Red LED	Green LED	Description
OFF	ON	Operational—MGate is enabled in the switch software, and the MGate card is operational.
OFF	OFF	MGate is not receiving power or the MGate card is faulty.
ON	ON	MGate is disabled in the switch software, but the MGate card is operational.
ON	OFF	MGate is disabled in the switch software, and the MGate card is faulty.
Blinking	Blinking	MGate is executing self-test diagnostics.

What's next?

Continue with Chapter 3, "Switch programming," on page 35.

To replace an MGate card

1 Courtesy down the DS0 channels from the CallPilot administrative PC to stop all call processing gracefully. Use the Channel Monitor or the Maintenance window, as described in Part 5 of this binder.

Note: If your system has multiple MGate cards, you can choose to courtesy stop only the DS30 channels belonging to the MGate that is being replaced.

2   Remove the switch cover front panel to expose the shelf slots.

3   Open the latches to unlock the faulty MGate card.

4   Remove the faulty MGate card from the switch.

   Note: You do not need to power down the switch for this procedure as the MGate card is hot-swappable.

5   Press the replacement MGate into the same slot that the faulty MGate card occupied.

   Note: If you place the MGate card in a new slot, then you must reprogram the switch to account for the new slot number, move the DS30X cable to the new slot, and reconfigure the software from the CallPilot administrative client PC.

6   Press the latches to close them, locking the card into position.

7   View the status of the LED indicators to ensure that the card is software-enabled (Red LED is OFF), and the card is operational (Green LED is ON).

8   Reenable the DS0 channels that were disabled before the card was removed. Use the Channel Monitor or the Maintenance window, as described in Part 5 of this binder.

Chapter 3

Switch programming

In this chapter

Switch hardware and software requirements

Supported Meridian 1 systems

The following Meridian 1 systems are supported:

- Option 11C
- Option 11C mini (for the 201i server only)
- 51C
- 61C
- 81
- 81C

Note: The copper-connected Option 11C does not support the ELAN, which is required for CallPilot.

Required X11 software

CallPilot requires software release X11R23.55 or later.

ATTENTION	This chapter describes the required responses for overlays in X11R23.55. Later X11 releases might have additional prompts, and the order of prompts might be different.

Required X11 packages

These are the required packages:

- 41 - ACDB (ACD Package B)
- 46 - MWC (Message Waiting Center)
- 214 - EAR (Enhanced ACD Routing)
- 215 - ECT (Enhanced Call Treatment)
- 218 - IVR (Hold in Queue for IVR)
- 247 - Call ID
- 324 - NGEN (CallPilot Connectivity)
- 364 - NMCE (CallPilot)
- 254 - PHTN (Phantom TN)

These are package 324 dependencies:

- 77 - CSL (Command Status Link)
- 153 - X25AP (Application Module Link - AML)

- 164 - LAPW (Limited Access to Overlays)
- 242 - MULI (Multi User Login)
- 243 - Alarm Filtering
- 296 - MAT (Meridian Administration Tool)

Required X11 patches

X11 requires a number of patches to support CallPilot.

For complete information about required software patches, refer to the section on "Switch Requirements" in the most recent issue of the General Release Bulletin, available at http://www.nortelnetworks.com/partnercenter.

You require a password to access this site.

Line card

For tower and rack CallPilot servers, one or more MGate cards must be installed in the Meridian 1 switch.

ATTENTION   An MGate card is not used with 200i or 201i servers.

List of relevant overlays

Introduction

Use the guidelines outlined in this section when working with overlays.

Note: This section assumes that you are familiar with M1 switch technology and the application of overlays.

Relevant overlays

Use the following overlays to provision the switch for CallPilot:

Task	Overlay
Provision the ELAN	17
Configure the switch IP addresses and enable the Ethernet interface:	
■ Change the IP addresses for the Ethernet interface	117
■ Enable the Ethernet interface	137
■ Enable the ELAN connection	48
Provision a Customer Data Block	15
Configure an ACD agent queue	23
Provision the ACD agents	11
Enable the card slots used by the MGate card or the 200i or 201i server	32
Define the default ACD DN	23
Configure CDN queues	23
Configure service DNs (phantom DNs or dummy ACD DNs)	
■ phantom loops	97
■ phantom DNs	10
■ dummy ACD DNs	23
Provision user phones	11 and 10
Provision the route data block for NMS	16

Note: You can also print configuration information from overlay 20 at any time.

Responding to overlay prompts

Overlays are programmed by responding to a series of prompts. The procedures in this section mention only those prompts that are relevant to CallPilot and that you must respond to in a certain way.

You can program any prompt that is not mentioned in any way. To accept the default value for other prompts, press Enter.

ATTENTION   Ensure that you update the switch database.

Working with overlays

When you work with overlays, follow these general steps:

1. Load the appropriate overlay.

2. Respond to the prompts as shown in the tables in this section. Press Enter after each prompt until you reach the next one that you must define for CallPilot.

3. When you complete the configuration, enter **** in response to the REQ prompt.

The customer number

CallPilot can only be provided on a per customer basis on the Meridian 1 switch. AML messages used for communications between the switch and CallPilot contain a customer number to which CallPilot belongs. When you enter the customer number in the overlays, ensure that it is the correct customer number.

Provisioning the ELAN

Introduction

Define the ELAN for the AML link and its associated VSID in the configuration record. This provides the Ethernet connection over which AML messages are exchanged between the M1 and CallPilot.

To provision the ELAN

Load overlay 17. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	CHG	Change
TYPE	ADAN	Action device and number
ADAN	NEW ELAN xx	Configure a new link and assign it a number, where xx is within the ELAN range (16 to 31). You can use any number in this range as long as it is not already used.
CTYP	ELAN	Card type
DES	x...x	Enter a designator to identify this ELAN.
REQ	CHG	Change
TYPE	VAS	Value added server configuration
VAS	new	Configure a new AML link or change the existing link configuration.
VSID	yy	The VAS identifier can be in the range of 16 to 31. For convenience, this can be the same number defined above.
ELAN	xx	This should be the same number defined in ADAN.
SECU	NO	You must disable security for VAS.
REQ	END	Exits the overlay.

Configuring switch IP addresses and enabling the Ethernet interface

Introduction

If the switch has not been defined with IP addresses, configure the IP addresses for the Ethernet interface. If the switch has been defined with the required primary and secondary IP address, then enable the ELAN link.

The procedure in this section addresses the following scenarios:

- For a single CPU M1 system (for example, Option 11C), there is only one Ethernet interface and a primary IP address.

- For a redundant or dual CPU M1 system (for example, Option 81C), you must define a primary and secondary IP address.

- If the switch is also connected to a CLAN, define a gateway IP address.

ATTENTION	To change an IP address after CallPilot is up and running, you must first stop and restart the system.

To configure the IP addresses and enable the Ethernet interface

The following data is used in examples in this procedure:

Data	Value (examples only)
Primary IP address	47.1.1.10
Primary Host Name	PRIMARY_IP
Secondary IP address	47.1.1.11
Secondary Host Name	SECONDARY_IP
Subnet mask	255.255.255.0
Default gateway IP address	47.1.1.1
Network IP address	0.0.0.0

1   Load overlay 117.

2   Perform the following substeps to check the current IP addresses to see if they already match what you have planned to configure for CallPilot.

   a.   Type **PRT HOST** and press Enter.

   b.   Type **STAT HOST** and press Enter.

     c. Type **PRT MASK** and press Enter.

     d. Type **PRT ELNK** and press Enter.

3   If the current values displayed by the commands in step 2 must be updated, then continue with the remaining steps in this procedure. Otherwise, go to step 17.

4   Load overlay 137.

5   Type **DIS ELNK** and press Enter.

6   Type **STAT ELNK** and press Enter.

7   Confirm that the system displays ELNK DISABLED.

8   Load overlay 117.

9   Create a host entry for the primary IP address by entering the following command:

    NEW HOST *NAME xxx.xxx.xxx.xxx* (where NAME is the host name for the primary IP address, and xxx.xxx.xxx.xxx is the primary IP address)

    Example:

    NEW HOST PRIMARY_IP 47.1.1.10

10   If the switch has a dual CPU system, also create a host entry for the secondary IP address by entering the following command:

    NEW HOST *NAME xxx.xxx.xxx.xxx* (where NAME is the host name for the secondary IP address, and xxx.xxx.xxx.xxx is the secondary IP address)

    Example:

    NEW HOST SECONDARY_IP 47.1.1.11

11   If the switch is connected to a CLAN, also create a host entry for the gateway IP address by entering the following command:

    NEW HOST *NAME xxx.xxx.xxx.xxx* (where NAME is the host name for the gateway IP address, and xxx.xxx.xxx.xxx is the gateway IP address)

    Example:

    NEW HOST GATEWAY 47.1.1.1

12   Assign a host to the primary IP address and secondary IP address (if applicable) by entering one or both of the following commands:

    CHG ELNK ACTIVE *NAME xxx.xxx.xxx.xxx* (where NAME is the host name for the primary IP address, and xxx.xxx.xxx.xxx is the primary IP address)

    CHG ELNK INACTIVE *NAME xxx.xxx.xxx.xxx* (this is applicable only if the switch has a dual CPU system; in this example, NAME is the host name for the secondary IP address, and xxx.xxx.xxx.xxx is the secondary IP address)

    Example:

    CHG ELNK ACTIVE PRIMARY_IP 47.1.1.10 (entry for primary host)

CHG ELNK INACTIVE SECONDARY_IP 47.1.1.11 (entry for secondary host, if the switch has a dual CPU system)

13 Set up the Ethernet subnet mask by entering the following command:

CHG MASK *xxx.xxx.xxx.xxx* (where xxx.xxx.xxx.xxx is the subnet mask)

Example:

CHG MASK 255.255.255.0

14 If using a gateway, set up the routing entry by entering the following command:

NEW ROUTE *xxx.xxx.xxx.xxx yyy.yyy.yyy.yyy* (where xxx.xxx.xxx.xxx is the network IP address and yyy.yyy.yyy.yyy is the gateway IP address; put one space between the network IP address and the gateway IP address)

Example:

NEW ROUTE 0.0.0.0 47.1.1.1

15 Update the INET database by entering the following command:

UPDATE DBS

16 Exit the overlay by entering the following command:

END

17 Load overlay 137.

18 Type **STAT ELNK** and press Enter.

19 If the system displays ELNK ENABLED, then go to step 20.

If the system displays ELNK DISABLED, then do the following substeps:

a. Type **ENL ELNK** and press Enter. Then type **STAT ELNK** and press Enter.

b. Confirm that the system displays ELNK ENABLED. Then go to step 20.

20 Load overlay 48.

21 Type **STAT ELAN** and press Enter.

22 If the system displays ELAN ENABLED, then go to step 23.

If the system displays ELAN DISABLED, then do the following substeps:

a. Type **ENL ELAN** and press Enter. Then type **STAT ELAN** and press Enter.

b. Confirm that the system displays ELAN ENABLED. Then go to step 23.

23 Load overlay 117.

24 Verify the changes as follows:

a. Type **PRT HOST** and press Enter.

b. Type **STAT HOST** and press Enter.

c. Type **PRT MASK** and press Enter.

Defining CallPilot in the customer data block

Introduction

You must define the CallPilot service in the customer data block, with the Call Park Allowed (CPA) and Message Center Included (MCI) options enabled.

During this configuration, you also define how unanswered and busy calls are routed:

■ Flexible Call Forward (FNAD/FNAN/FNAL) is set on a per customer basis. Define the call forward DN in the user's phoneset data.

■ Call Forward No Answer/Busy (MDID/NDID/MWFB) is set on a per customer basis. All no answer and busy calls are routed to the flexible call forward DN, provided that the called phoneset has Message Waiting Allowed (MWA) class of service enabled.

Normally, non-Direct Inward Dialing (DID) calls are routed to CallPilot when a no answer or busy condition is encountered. As an option, you can route DID calls to the attendant's or user's Hunt DN.

To modify the customer data block

Load overlay 15. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	CHG	Change
TYPE	FTR	Customer features and options
CUST	xx	Customer number (0–99)
OPT	CPA MCI	Call Park Allowed and Message Center Included are enabled for the customer.
IDEF	YES or NO	Internal/External Definition. Set to YES if Call Forward by Call Type feature (CFCT) is enabled on the switch.

Load overlay 15 again. For each prompt listed below, enter the response indicated:

Prompt	Response	Description
REQ	CHG	Change
TYPE	ATT	Attendant consoles
CUST	xx	Customer number (0–99)

Prompt	Response	Description
ATDN	(0) yyyy	Attendant DN
MATT	NO (YES)	Set to YES if Network Message Service (NMS) has not been purchased.
		If NMS has been purchased, set the primary switch to YES and all secondary switches to NO.

Load overlay 15 again. For each prompt listed below, enter the response indicated:

Prompt	Response	Description
REQ	CHG	Change
TYPE	RDR	Call Redirection
CUST	xx	Customer number (0–99)
FNAD	FDN	Call forward no answer DID calls are routed to flexible CFNA DN.
FNAN	FDN	Call forward no answer non-DID calls are routed to flexible CFNA DN.
FNAL	FDN	Call forward no answer local calls (with CFCT enabled) are routed to flexible CFNA DN.
CFNA, CFN0, CFN1, CFN2	4	The number of ring cycles before the call is forwarded. The prompts CFN0, CFN1, and CFN2 might appear instead of CFNA, depending on the release installed on the switch. Refer to your Meridian 1 X11 documentation for details.

Load overlay 15 again. For each prompt listed below, enter the response indicated:

Prompt	Response	Description
REQ	CHG	Change
TYPE	FTR	Customer features and options
CUST	xx	Customer number (0–99)
EEST	(NO) YES	The originating party does not receive DTMF feedback. Set remote Meridian 1 sites to NO.

Load overlay 15 again. For each prompt listed below, enter the response indicated:

Prompt	Response	Description
REQ	CHG	Change
TYPE	NET	Networking
CUST	xx	Customer number (0–99)

Prompt	Response	Description
ISDN	(NO) YES	Set to YES only if NMS has been purchased. Otherwise, set to NO.
PNI		NMS only. The Private Network Identifier. Within one network, use the same PNI value in overlays 15 and 16. When you interwork with different networks, enter the PNI of this Meridian 1 in overlay 15, and the PNI of the remote switch in overlay 16.
HLOC		NMS only. Home Location Code (ESN) of the Meridian 1. This can be in the range 100–999.
LSC		NMS only. Local Steering Code (established in the Coordinated Dialing Plan, or CDP) of the Meridian 1. This prompt only appears for 5- or 6-digit dialing plans.
	<Enter>	Press Enter until you reach the end of the overlay (REQ prompt).
REQ	****	Exits the overlay.

Additional steps to support the Call Forward by Call Type feature

The Call Forward by Call Type (CFCT) feature is installed as part of the base X11 software.

Load overlay 16. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Note: IDEF must be set to YES in overlay 15 to support CFCT and for the IDEF prompt to appear in overlay 16 (see "To modify the customer data block" on page 44).

Prompt	Response	Description
REQ	NEW or CHG	
TYPE	RDB	Route data block
CUST	xx	Customer number (0–99)
ROUTE		Route number
RCLS	EXT	
IDEF	LOC	
	<Enter>	Press Enter until you reach the end of the overlay (REQ prompt).
REQ	****	Exits the overlay.

Configuring the ACD agent queue

Introduction

You must set up only one ACD agent queue to service CallPilot. This queue holds all the agents that correspond to DS0 channels on the CallPilot server.

Note: The ACD DN is not normally used as a Service DN. However, in applications where calls are to be overflowed into CallPilot, you must define the ACD DN as a Service DN.

To configure the agent queue

Load overlay 23. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	ACD	Indicates this is an ACD queue.
CUST	xx	Customer Number (0–99)
ACDN	yyyy	This is the ACD DN for CallPilot.
MWC	NO	Message Waiting Center. Set to NO.
MAXP	zzzz	Maximum number of agents. MAXP must be equal to or greater than the total number of multimedia channels installed on your system.
IVR	YES	Interactive Voice Response queue
ALOG	YES	Provide automatic logon for ACD agents.
	<Enter>	Press Enter until you reach the REQ prompt.
REQ	****	Exits the overlay.

Configuring ACD agents

Introduction

For CallPilot, you must define channels as ACD agents on M2008 digital sets. All agents are added to the ACD queue that you have configured.

Each agent must have the VCE, WTA, UNR, and MMA class of service. To get the VCE class of service on the upper 16 units (15–31), you must first specify the FLXA class of service. Each agent must be provisioned with the following feature keys: ACD, SCN, NRD, MSB, TRN, and AO3.

Note: You can define a more restrictive class of service for the agents (for example, Conditionally Toll Denied [CTD]). Call restrictions in effect for the class of service take precedence over the dialing restriction/permission provided by CallPilot.

Terminal numbers

A Terminal Number (TN) is required for each agent.

Integrated server (for example, 200i or 201i server)
On the integrated version of the CallPilot server, ACD agents use TNs associated with the slot location of the IPE card.

Tower or rackmount servers
On the tower and rack versions of the CallPilot server, ACD agents use TNs associated with the slot location of the MGate card.

Position IDs

You also need a Position ID for each agent. The server uses the position ID to inform the switch to which agent an incoming call should be routed.

For ease of maintenance, assign sequential numbers to the IDs that are not already in use.

To configure agents

Load overlay 11. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW	
TYPE	2008	ARIES digital set with 8 programmable keys.

Prompt	Response	Description
TN	l s c u	Terminal Number of the MGate card (tower and rack server), or the 200i or 201i unit, where **l** is the loop, **s** is the shelf, **c** is the card, and **u** is the unit. (For the Option 11C, TN is **cu** only.)
CUST	xx	Customer number (0–99)
CLS	VCE WTA UNR MMA (units 0-15) FLXA VCE WTA UNR MMA (units 16-31)	Voice terminal, Warning tone allowed, Unrestricted, Multimedia Agent, Flexible voice/ data allowed.
key	0 acd xxxx 0 yyyy	where xxxx is the ACD DN of the CallPilot agent queue and yyyy is the Position ID of the agent.
key	1 scn zzzz	where zzzz is the single-call non-ringing DN used to make outbound calls.
key	2 msb	Make Set Busy
key	3 nrd	Not Ready
key	4 trn	Transfer
key	5 ao3	Three-Party Conference
	<Enter>	Press Enter to the end of the overlay (the REQ prompt).
REQ		If you are finished adding agents, enter **** to exit the overlay. To add another agent, return to the top of the table.

Enabling the card slots

Introduction

After you have configured the ACD agents, use Overlay 32 to ensure that the card slots used by an MGate card, 200i server, or 201i server are enabled.

Note: The 201i server occupies two slots. Both slots must be enabled to use all ports supported by the 201i server.

To enable the card slots

Note: This procedure uses the syntax **STAT n** and **ENLC n**. This is correct for an Option 11 switch. For larger M1 switches, use the syntax **STAT l s c** and **ENLC l s c**, where **l** is the loop, **s** is the shelf, and **c** is the card slot.

1   Load overlay 32.

2   Type **STAT n** and press Enter, where **n** is the card slot used by an MGate card, 200i server, or 201i server.

   Result: The status of the ACD agents defined for this slot appears. If the ACD agents are disabled, then enable the card slot.

3   Type **ENLC n** and press Enter, where **n** is the card slot used by an MGate card, 200i server, or 201i server.

4   To verify that the card slot and the ACD agents are enabled, type **STAT n** and press Enter, where **n** is the card slot used by an MGate card, 200i server, or 201i server.

   Result: The status of the ACD agents defined for this slot appears.

5   Repeat this procedure for all other card slots used by an MGate card, 200i server, or 201i server.

Defining the default ACD DN

Introduction

Before you configure the CDN queue, define the default ACD DN that needs to be referenced in the CDN. During normal operation, the CDN is in control mode, and callers are queued to be routed and then answered by CallPilot services. Under error conditions (for example, if the AML link is down), the CDN operates in default mode and calls are routed to the default ACD DN defined for the CDN. This section describes how to set up the default ACD DN so that these calls are handled by the attendant.

For the attendant to process incoming calls to CallPilot when the CDN is in default mode, define a dummy ACD DN and set it to night call forward to the attendant.

Note: This section describes one possible setup for the default ACD DN. The default ACD DN could be defined as an ACD queue with live agents, a Meridian Mail ACD-DN, or a dummy ACD-DN that is night call forwarded to a phone set.

To create a default ACD DN

Load overlay 23. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW	
TYPE	ACD	
CUST	0	Customer number (0–99)
ACDN	xxxx	The ACD DN. Enter this DN as the DFDN in the CDN configuration.
MWC	NO	Message Waiting Center. Set to NO.
MAXP	1	This indicates that there are no agents in this queue and it is, therefore, a dummy queue.
NCFW	0	Night call forward to the attendant.
	<Enter>	Press Enter to the end of the overlay (the REQ prompt).
REQ	****	Exits the overlay.

Configuring CDN queues for messaging services

Introduction

Configure the following CDN queues:

■ Configure a primary CDN for Voice Messaging. This becomes the main CDN queue.

■ Configure a secondary CDN for Multimedia Messaging, if you want to provide users with fax capability.

Note: Nortel Networks strongly recommends that you use either a phantom DN or a dummy ACD DN for all other messaging services.

To configure a CDN queue

Load overlay 23. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW	
TYPE	CDN	Control DN queue
CUST	xx	Customer number (0–99)
CDN	yyyy	The Control DN of the queue. This number must be entered as the SDN for the messaging service in the SDN Table.
DFDN	zzzz	The default ACD DN (see page 52). Calls to the CDN are directed to this ACD DN if the link or CallPilot goes down. Nortel Networks recommends that this is not defined as the ACD DN of the CallPilot ACD queue.
VSID	<Enter>	Press Enter so that the ID is dynamically assigned to the CDN when the ELAN link is established.
	<Enter>	Press Enter to the end of the overlay (the REQ prompt).

Prompt	Response	Description
REQ		To configure another CDN, return to the top of the table.
		To exit, enter ****.

Configuring phantom DNs

Introduction

There are two reasons for configuring phantom DNs on the switch:

- to create dialable numbers for CallPilot services
- to create virtual fax DNs for users who want a separate fax number

ATTENTION   Another option is to configure dummy ACD DNs instead of phantom DNs. See "Configuring dummy ACD DNs" on page 58.

Supporting multiple languages

For Fax Item Maintenance, Voice Item Maintenance, Speech Activated Messaging, and Paced Speech Messaging, multiple language support might have been purchased.

This means that, for example, you can create an English and a Spanish version of Voice Item Maintenance if you have these languages installed. To support this, you need to create a phantom DN for each supported language. Therefore, in this case, you need two phantom DNs (one for English Voice Item Maintenance and one for Spanish Voice Item Maintenance). This also means that callers must dial a different number to access the service, based on the language they prefer.

Virtual fax DNs for users with fax capabilities

Users who have fax capabilities can have one DN that serves as both their regular extension number and their fax number. In this case, you set up a phone for the user as described in "Provisioning user phonesets" on page 59. The user's phone must be forwarded to the Multimedia Messaging CDN.

However, some users might need or want two separate DNs—one DN that serves as their regular telephone number, and a second DN that serves as their fax number. For these users, you cannot simply define the virtual fax DN as another DN on the user's phoneset. Instead, you must set up a TN as the virtual fax DN. Since physical TNs are more costly, Nortel Networks recommends that you configure phantom DNs instead.

A separate TN is necessary because a single TN (the telephone) can only be call forwarded to one DN (regardless of how many DNs appear on that phone). For these users, you must ensure that their "telephone number" (the mailbox DN) forwards to the Voice Messaging CDN, whereas their "fax number" (the virtual fax DN) forwards to the Multimedia Messaging CDN.

In CallPilot, when you add the user, you must define this virtual fax DN as one of the user's extension DNs.

To check for existing phantom loops

A phantom loop must exist before you begin to configure phantom DNs. Use overlay 22 to print the configuration record to see if any phantom loops are already configured. A phantom loop is shown with the prefix "P" illustrated in this example:

Note: You can use superloops as phantom loops.

```
.
.
CEQU
  MPED 8D
  SUPL 000 004 008 012
     016  032  036  040
      048  P064  P068    (phantom loops 64 and 68)
DDCS
.
.
```

To configure a phantom superloop

If no phantom loops are configured, load overlay 97. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	CHG	
TYPE	SUPL	Superloop
SUPL	Nxxx	Prefix the loop number with N to create a phantom loop.
		The loop number range is 0–156 on Option 51C/61C/81C. On Option 81/81C, the loop range is 0-252 on Release 25 or later.
		On the Option 11C on X11 Release 23.55, the phantom loop number range is 64–80 in multiples of 4 (corresponds to slots 41–60). On the Option 11C on X11 Release 24 or higher, the range is 96–112 in multiples of 4 (corresponds to slots 61–80).
	<Enter>	Press Enter to the end of the overlay (the REQ prompt).
REQ	****	Exits the overlay.

To configure a phantom DN

Load overlay 10. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW	
TYPE	500	PBX set type
TN	l s c u	Terminal Number, where **l** is the loop, **s** is the shelf, **c** is the card, and **u** is the unit. (For the Option 11C, TN is **cu** only.) PHANTOM is echoed by the switch when the specified loop is phantom.
CDEN	xx	The card density supported by the loop, where xx can be SS - single density DD - double density 4D - quadruple density
DN	yyyy	The DN must be single appearance.
CLS	UNR	Unrestricted. Phantom DNs cannot originate calls, so this option is secure.
FTR	DCFW nn xxxx	DCFW = Default Call Forward nn = maximum number of digits in the DCFW DN xxxx = the CDN to which this DN forwards If this phantom DN is for a voice service, enter the Voice Messaging CDN. If this phantom DN is for a fax service, enter the Multimedia Messaging CDN. If this phantom DN is a virtual fax DN for a user, enter the Multimedia Messaging CDN.
	<Enter>	Press Enter until you reach the end of the overlay (REQ prompt).
REQ		If you are finished adding phantom DNs, enter **** to exit. To add another DN, return to the top of the table.

Configuring dummy ACD DNs

Introduction

As an alternative to creating phantom DNs for directly dialable services, you can create a dummy ACD DN that is set up to call forward to the appropriate CDN depending on the multimedia channel type required.

Example

- For a service that requires only voice capability, forward the dummy ACD DN to the Voice Messaging CDN.
- For a service that requires fax capability, forward the dummy ACD DN to the Multimedia Messaging CDN.

To configure dummy ACD DNs

Load overlay 23. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW	
TYPE	ACD	
CUST	xx	Customer number (0–99)
ACDN	xxxx	Enter the DN for the service.
MWC	YES or NO	Message Waiting Center. If the CallPilot server is a Network Message Service (NMS) satellite site, set to YES. Otherwise, set to NO.
MAXP	1	This indicates that there are no agents in this queue and it is, therefore, a dummy queue.
NCFW	yyyy	Specify the appropriate CDN depending on multimedia channel type required (Voice Messaging CDN or Multimedia Messaging CDN).
	<Enter>	Press Enter to the end of the overlay (the REQ prompt).
REQ	****	Exits the overlay.

Provisioning user phonesets

Introduction

You must set up mailbox users' phonesets in a certain way to support CallPilot. The procedure depends on whether you are provisioning a digital or a 500 phoneset.

Required features

You must set up phonesets to support the following features:

- Call forward no answer to the appropriate CDN (voice or multimedia)

  Note: You cannot forward users' phones to the Speech Activated Messaging CDN since this service does not provide call answering functionality.

- Call forward busy to the appropriate CDN

- Call forward all calls to the appropriate CDN

- Message Waiting key with the appropriate CDN as the Message Center DN

Note: If you do not plan to give fax capability to the user's mailbox, use the Voice Messaging CDN. If you plan to give fax capability to the user's mailbox, then use the Multimedia Messaging CDN.

To provision digital phonesets

Load overlay 11. For each prompt listed below, enter the response indicated in overlay 11. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW or CHG	
TYPE	2317, 2008, 2616, etc.	Type of set
TN	l s c u	Terminal Number of the phone, where **l** is the loop, **s** is the shelf, **c** is the card, and **u** is the unit. (For the Option 11C, TN is **cu** only.)
CUST	xx	Customer number (0–99)
FDN	yyyy	Flexible call forward no answer DN. Set this to the CDN of the Voice Messaging or Multimedia Messaging CDN queue.
HUNT	zzzz	Hunt (internal). Set this to the CDN of the Voice Messaging or Multimedia Messaging CDN queue.

Prompt	Response	Description
CLS	FNA, FBA, HTA, MWA	Call forward no answer allowed. Call forward busy allowed. Hunt allowed. Message waiting allowed.
KEY	0 SCR xxxx	Single call ringing DN, where xxxx is the user's DN.
CPND	New	Calling Party Name Display (if adding a new set).
NAME	First,Last	The name of the phoneset user.
KEY	3 MSB	Make set busy
KEY	4 TRN	Transfer
KEY	5 AO3	Three-party conference. Required by the Call Sender feature.
KEY	6 CFW nn xxxx	Call forward all calls, where nn = maximum number of digits in the Call Forward DN and xxxx is the Voice Messaging or Multimedia Messaging CDN.
KEY	8 MWK yyyy	Add a message waiting key/lamp, where yyyy is the Voice Messaging or Multimedia Messaging CDN.
	<Enter>	Press Enter to the end of the overlay (the REQ prompt).
REQ		If you are finished adding phonesets, enter **** to exit.
		To add another phoneset, return to the top of the table.

To provision 500/2500 phonesets

Load overlay 10. For each prompt listed below, enter the response indicated in overlay 10. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW	
TYPE	500	500 phoneset
TN	l s c u	Terminal Number of the phone, where **l** is the loop, **s** is the shelf, **c** is the card, and **u** is the unit. (For the Option 11C, TN is **cu** only.)

Prompt	Response	Description
CUST	xx	Customer number (0–99)
DN	yyyy	Directory Number
HUNT	zzzz	Hunt (internal). Set this to the CDN of the Voice Messaging or Multimedia Messaging CDN queue.
CLS	HTA, MWA, FNA, FBA, XFA, LPA, DTN	Hunt allowed. Message waiting allowed. Call forward no answer allowed. Call forward busy allowed. MWI lamp is equipped (if not equipped, users are notified of new messages by interrupted dial tone).
FTR	FDN xxxx	Flexible call forward no answer. Set this to the Voice Messaging or Multimedia Messaging CDN.
FTR	CFW yy	Call forward all calls, where yy is the maximum DN length that users can specify as the call forward DN.
	<Enter>	Press Enter to the end of the overlay (the REQ prompt).
REQ		If you are finished adding phonesets, enter **** to exit.
		To add another phoneset, return to the top of the table.

Configuring the route data block for Network Message Service

Introduction

If you have purchased Network Message Service (NMS) to allow a number of switches to share CallPilot (installed on only one switch), then configure the route data block.

Note: Make sure that Digit Manipulation (DMI in overlay 86) is not used to insert ESN access codes at the sending switch. ESN access code insertion must be done at the receiving switch (INAC in overlay 16).

To modify the route data block

Load overlay 16. For each prompt listed below, enter the response indicated. For those prompts that are not listed, you can accept the default by pressing Enter.

Prompt	Response	Description
REQ	NEW or CHG	
TYPE	RDB	Route data block
CUST	xx	Customer number (0–99)
ROUTE		Route number
PNI		Customer Private Network ID of the non-local target Meridian 1
NCRD	Yes	Network call redirection provides the CLID display information.
TRO	Yes	Optimize trunk usage on this route.
INAC	Yes	Insert an ESN access code to incoming private network calls.
	<Enter>	Press Enter until you reach the end of the overlay (REQ prompt).
REQ	****	Exits the overlay.

Configuring switches for Network Message Service

Introduction

Switches provide the call handling required by CallPilot.

All switches that are used by NMS are already configured and tested when you begin to implement NMS.

However, you must check this configuration to determine if it is suitable for NMS. You must also do additional configuration to enable functionality that is required by NMS.

For more information on how to configure switches for NMS, refer to the "Configuring the switches" chapter in the *CallPilot NMS Implementation and Administration Guide.*

Saving Meridian 1 changes

Introduction

Once you modify the switch configuration to support CallPilot, save all changes to disk.

To save your configuration

1   Load overlay 43.

2   At the next "." prompt, type **EDD** to dump the data to disk.

Result: The system displays the data being saved. The following message appears:

```
RECORD COUNT=xxxx
DATADUMP COMPLETE
```

3   Return to step 2, and repeat this step two more times. Use a new disk each time.

ATTENTION   Do not remove the disk while the LED is lit. As long as the LED is on, the disk is still being written to.

What's next?

For 200i or 201i servers, continue with Chapter 6, "Configuring the server software," on page 75.

For tower or rackmount servers, continue with Chapter 4, "Connecting the server to the switch," on page 65.

C h a p t e r 4

Connecting the server to the switch

In this chapter

Connecting the MGate card to the MPB16-4 board

Introduction

Only the cabling configurations detailed in this chapter are supported for CallPilot.

Note: An MGate card is not used with 200i or 201i servers. If you are installing a 200i or 201i server, continue with Chapter 6, "Configuring the server software," on page 75.

CAUTION

Risk of data loss
Do not use a double cable in place of a single cable in any configuration.

ATTENTION   The CallPilot server must be located within 10 meters (30 feet) of the switch.

Identifying the location of MPB16-4 #1 and #2

In the cabling diagrams, the terms MPB16-4 #1 and MPB16-4 #2 are used to identify the two MPB16-4 boards. Refer to the slot assignment tables in Part 2 of this Installation binder to identify which PCI slot holds MPB16-4 #1 and MPB16-4 #2.

Identifying the location of MGate #1, #2, and #3

In the cabling diagrams, the terms MGate #1, MGate #2, and MGate #3 are used to identify the MGate cards. MGate #1 is in the lowest numbered slot in the switch.

Supported configurations for MPB16-4 board (NTRH20BA)

1 MPB16-4 plus 1 MGate card (32 channels or less)

The MGate card must be connected to the MPB16-4 board with a single cable (NTRH2012).

```
┌──────────────────┐  DB-25    NTRH2012    ┌──────────────┐
│   MPB16-4 #1     │───────────────────────│   MGate #1   │
└──────────────────┘                       └──────────────┘
```

1 MPB16-4 plus 2 MGate cards (48 channels or less)

MGate cards are connected to the MPB16-4 with a double cable (NTRH2013).

- Connect the DB-25 connector on the NTRH2013 cable to the MPB16-4.

- Connect the MGate #1 card to the DS30X1 end of the NTRH2013 cable.

- Connect the MGate #2 card to the DS30X2 end of the NTRH2013 cable.

```
                          NTRH2013 (DS30X1)    ┌──────────────┐
┌──────────────────┐     ╱──────────────────── │   MGate #1   │
│   MPB16-4 #1     │────┤                       └──────────────┘
└──────────────────┘     ╲──────────────────── ┌──────────────┐
     DB-25                NTRH2013 (DS30X2)     │   MGate #2   │
                                                └──────────────┘
```
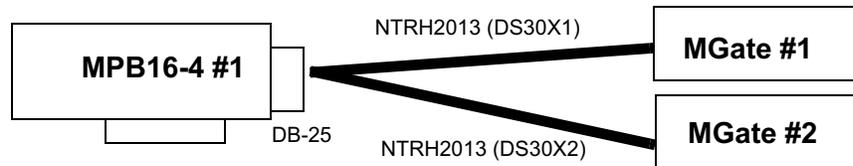
2 MPB16-4 plus 1 MGate card (32 channels or less)

The MGate card is connected to MPB16-4 #1 using the single cable (NTRH2012).

```
            ┌──────────────────┐    NTRH2012     ┌──────────────┐
            │   MPB16-4 #1     │─────────────────│   MGate #1   │
            └──────────────────┘  DB-25          └──────────────┘
SCbus
Cable       ┌──────────────────┐
            │   MPB16-4 #2     │  DB-25
            └──────────────────┘
```
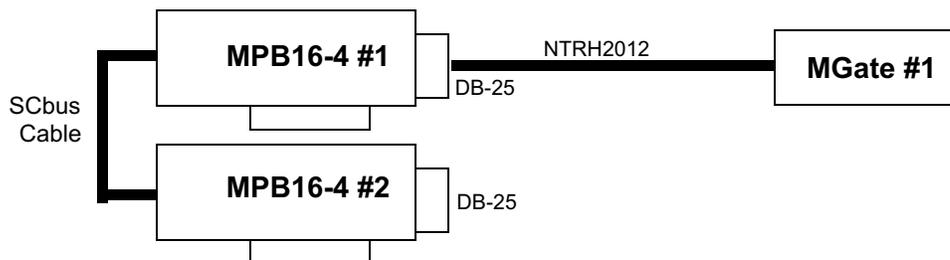
2 MPB16-4 plus 2 MGate cards (64 channels or less)

MGate cards are connected to the MPB16-4 #1 board with a double cable (NTRH2013).

- Connect the DB-25 connector on the NTRH2013 cable to the MPB16-4 #1.

- Connect the MGate #1 card to the DS30X1 end of the NTRH2013 cable.

■ Connect the MGate #2 card to the DS30X2 end of the NTRH2013 cable.

```
                        DB-25
  ┌─────────────────┐┌──┐
  │   MPB16-4 #1    ││  │  NTRH2013 (DS30X1)    ┌──────────────┐
  │                 ││  │───────────────────────│  MGate #1    │
  └────────┬────────┘└──┘                       └──────────────┘
SCbus   ┌──┴──┐
Cable
  ┌─────────────────┐┌──┐     NTRH2013          ┌──────────────┐
  │   MPB16-4 #2    ││  │     (DS30X2)           │  MGate #2    │
  │                 ││  │                        └──────────────┘
  └────────┬────────┘└──┘
        ┌──┴──┐
              DB-25
```
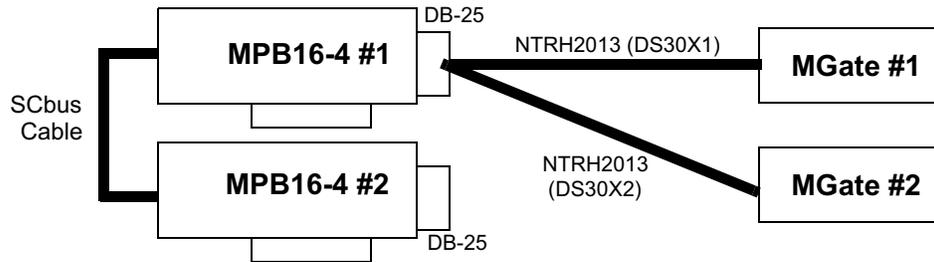
2 MPB16-4 plus 3 MGate cards (96 channels or less)

MGate cards are connected to the MPB16-4 boards with one single NTRH2012 cable and one double NTRH2013 cable.

■ Connect the DB-25 connector on the NTRH2013 cable to MPB16-4 #1.

■ Connect the MGate #1 card to the DS30X1 end of the NTRH2013 cable.

■ Connect the MGate #2 card to the DS30X2 end of the NTRH2013 cable.

■ Connect the DB-25 connector on the NTRH2012 cable to MPB16-4 #2.

■ Connect the MGate #3 card to MPB16-4 #2 with a single NTRH2012 cable. This is actually connection DS30X3, although this designation is implied and not labeled as such.

```
  ┌─────────────────┐┌──┐   NTRH2013 (DS30X1)   ┌──────────────┐
  │   MPB16-4 #1    ││  │───────────────────────│  MGate #1    │
  │                 ││  │                        └──────────────┘
  └────────┬────────┘└──┘  DB-25
SCbus   ┌──┴──┐                  NTRH2013        ┌──────────────┐
Cable                            (DS30X2)        │  MGate #2    │
  ┌─────────────────┐┌──┐  DB-25                 └──────────────┘
  │   MPB16-4 #2    ││  │───────────────────────┌──────────────┐
  │                 ││  │                        │  MGate #3    │
  └────────┬────────┘└──┘    NTRH2012            └──────────────┘
        ┌──┴──┐      (DS30X3 - not labeled, implied)
```
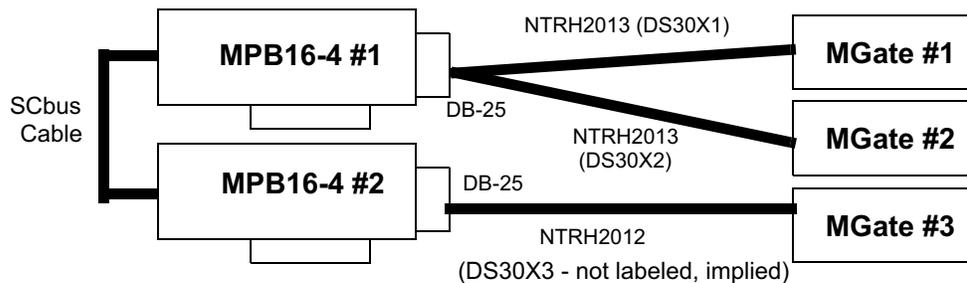
Connecting the server to the ELAN

Introduction

The CallPilot server must be connected to the switch using the Embedded LAN (ELAN). The Embedded LAN is sometimes referred to as the Equipment LAN.

Note: This section is not applicable to the 200i or 201i server. For the 200i or 201i server, this step is part of the server hardware installation described in Part 2 of CallPilot Installation and Configuration.

ATTENTION   Desktop client PCs should not use the ELAN. Each Meridian 1 Option 11C (with up to two expansion cabinets) and Meridian 1 four-tier switch should have its own dedicated ELAN. The ELAN cannot support high volumes or intensive IP traffic originating within the local ELAN or from external interconnected networks.

CAUTION

Risk of reduced system performance

Based on the size and required administrative operations of an external network, you might want to internetwork the ELAN using routers, bridges, or switches.

Direct connection of the ELAN to external networks (such as the CLAN), or improper router, bridge, or switch device selection or configuration can adversely affect the call processing abilities of ELAN-based Meridian switches and CallPilot servers.

As a result, router and switching technologies applied to the ELAN are not recommended. If you require such connections, contact your Nortel Networks support representative.

In addition to its primary purpose of carrying call control information, the ELAN facilitates network-based management by allowing for local onsite administration of CallPilot servers and Meridian switches using ELAN-based administration client PCs. CallPilot Administrative PCs are typically located on the CLAN if a CLAN is available.

> **CAUTION**
>
> **Risk of reduced system performance**
>
> Since the ELAN carries critical real-time traffic between the CallPilot server and the Meridian switch, bandwidth-intensive OA&M activities on the ELAN are prohibited while CallPilot call processing is in progress. These activities include remote control, large file transfers, backup and restore operations, printing, and other traffic-intensive tasks. Failure to adhere to this guideline adversely affects the call processing abilities of ELAN-based Meridian switches and CallPilot servers.

Media Access Control address

The Media Access Control (MAC) address is a unique number assigned to network interface cards. In the procedure below, you are asked to record the MAC address from the label on the ELAN card backplate.

To connect the ELAN

1   Use the slot assignments table in the server hardware installation document (Part 2 of this Installation binder) to identify the ELAN card location.

2   Write down the MAC address from the label on the ELAN card backplate. You need the MAC address to identify the card in the CallPilot server Configuration Wizard.

_____. (MAC address for ELAN card)

3   Connect the customer's network cable from the ELAN to the ELAN card.

4   At the switch, connect the ELAN network cable to an MAU (Ethernet) transceiver. Then complete the connection from the transceiver to the switch.

> **DANGER**
>
> **Risk of fire hazard**
>
> MAU model NTRH9069 is not suitable for installation in ducts, plenums, or other spaces used for environmental air. Do not install it above a false ceiling or below a raised floor, unless it can be confirmed that these spaces are not used to convey environmental air.

What's next?

If the customer has a CLAN, continue with Chapter 5, "Connecting the server to the CLAN," on page 73. Otherwise, continue with Chapter 6, "Configuring the server software," on page 75.

Chapter 5

Connecting the server to the CLAN

In this chapter

Connecting the server to the CLAN

Introduction

This section describes how to connect CallPilot to the CLAN.

Note: This section is not applicable to the 200i or 201i server. For the 200i or 201i server, this step is part of the server hardware installation described in Part 2 of CallPilot Installation and Configuration.

ATTENTION	The existence of a CLAN is optional for the customer. A CLAN is required to support Desktop Messaging.

Media Access Control address

The Media Access Control (MAC) address is a unique number assigned to network interface cards. In the procedure below, you are asked to record the MAC address from the label on the CLAN card backplate.

To connect the CLAN

1 Use the slot assignments table in the server hardware installation document (Part 2 of this binder) to identify the CLAN card location.

2 Write down the MAC address from the label on the CLAN card backplate. You need the MAC address to identify the card in the CallPilot server Configuration Wizard.

_____. (MAC address for CLAN card)

3 Connect the customer's network cable from the CLAN to the CLAN card.

What's next?

Continue with Chapter 6, "Configuring the server software," on page 75.

Chapter 6

Configuring the server software

In this chapter

Overview

Introduction

The Configuration Wizard enables you to configure the CallPilot server software. You can rerun the Configuration Wizard to update or review the server configuration.

> **CAUTION**
>
> **Risk of improper configuration**
> You must use the Configuration Wizard to change the computer name and to change the baud rate of the SMDI link (for MSL-100/ DMS-100 switches). If you use Windows NT methods to change the computer name or the SMDI link, they are not properly updated in the CallPilot software.

Plan your responses to the Configuration Wizard

Ensure you have planned your responses to the Configuration Wizard using the Configuration Wizard worksheets in Part 1of this Installation binder.

To help you plan your responses for the Configuration Wizard, this chapter includes examples of the Configuration Wizard dialog boxes.

Preparing a configuration file before installing CallPilot (off-server method)

The distributor has the option of running an off-server version of the Configuration Wizard on a laptop or common PC and preparing a configuration file prior to the CallPilot installation date.

In the Off-Server Configuration Wizard, some of the dialog boxes do not appear, such as the Computer Name dialog box. However, the distributor can enter information in the dialog boxes that are shown, to prepare most of the configuration ahead of the CallPilot installation date.

You can save the configuration to the PC and then transfer it to a floppy disk or to a network drive for use in the CallPilot installation.

Running the Configuration Wizard on the CallPilot server

When you run the Configuration Wizard on a CallPilot server, you have the option to edit the current configuration (that is, configure the server).

You also have the option of loading a configuration file that has been prepared prior to the installation by the distributor in the Off-Server Configuration Wizard. If you load a configuration file, then you still need to step through the Configuration Wizard dialog boxes and complete any dialog boxes that have not been filled in, and make changes as required.

Some default values and some data that is read from the computer appear in the dialog boxes even the first time you run the Configuration Wizard. Some fields might be blank.

See Section B: "On-server configuration," on page 85 for instructions.

Saving the configuration to a file to complete at a later time

If you do not have all the information you need to configure the CallPilot server, you can save the configuration information to a file. When you have the necessary information, rerun the Configuration Wizard, load the configuration file, and complete the configuration.

Recovering Configuration Wizard changes if there is a system interruption

If a system interruption prevents the Configuration Wizard from finishing or applying the configuration changes, you might be able to recover the entries you made in the Configuration Wizard prior to the system problem. If CallPilot can save a recovery file, then, when you rerun the Configuration Wizard, you are asked if you want to recover your changes. Select Yes and step through the Configuration Wizard.

Running the Configuration Wizard to detect replacement boards

When you replace MPB boards, MPC-8 cards, or boards used for connectivity to the switch, you must rerun the Configuration Wizard to detect and initialize the hardware. You do not need to change any data in the Configuration Wizard to perform this operation, but you do need to apply the configuration as instructed when you complete the Configuration Wizard.

Section A: Off-server configuration

In this section

Using the off-server version of the Configuration Wizard

Introduction

The distributor has the option of running an off-server version of the Configuration Wizard on a laptop or common PC and preparing a configuration file ahead of the CallPilot installation date. This section describes how to install the Off-Server Configuration Wizard and how to create a configuration file.

To install the Off-Server Configuration Wizard

1   Insert the PEP CD.

2   On the PEP CD, open the offserver_config_wiz folder.

3   Double-click setup.exe.

Result: The Welcome dialog box appears.
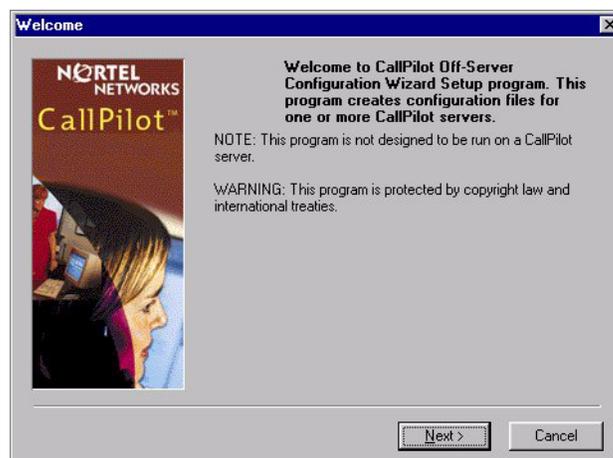
4   Click Next.

Result: The following dialog box appears:
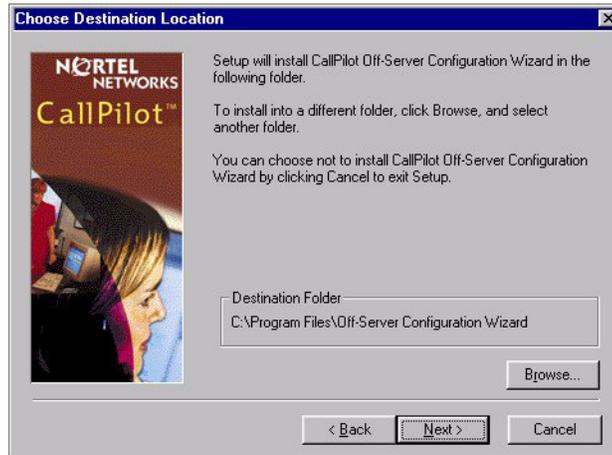
5   Click Next to accept the default or click Browse to select a different destination
folder.

Result: The following dialog box appears:
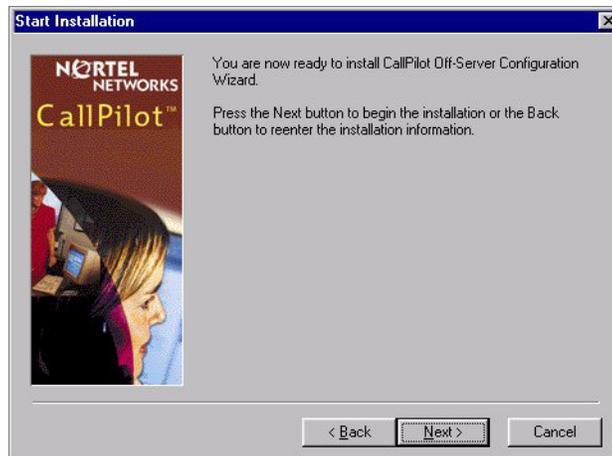
6   Click Next.

Result: The Off-Server Configuration Wizard is installed. When finished, the following dialog box appears:
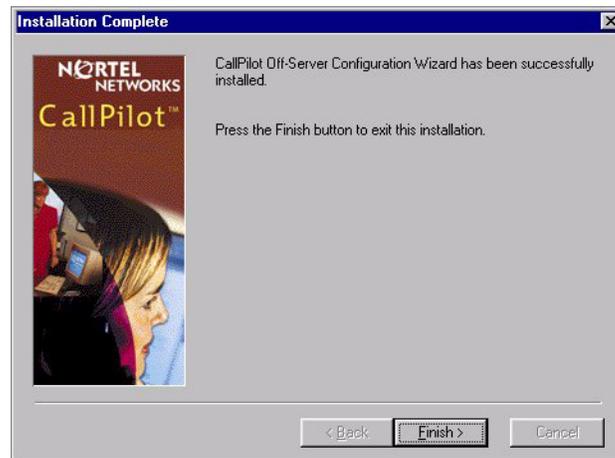
7   Click Finish.

Result: The Off-Server Configuration Wizard installation is complete.

To run the Off-Server Configuration Wizard

1   On the PC that has the Off-Server Configuration Wizard, click Start > Programs > CallPilot > Configuration Wizard.

Result: The Off-Server Configuration Wizard launches.

2   Follow the instructions on the dialog boxes. Configuration Wizard dialog box examples and instructions are in Section B: "On-server configuration," on page 85.

Note: In the Off-Server Configuration Wizard, the following dialog boxes do not appear:

■   Computer Name

■   Multimedia Hardware

■   Media Allocation

- Language Source Directory and other dialog boxes relating to language installation, reinstallation, or upgrade

- dialog boxes for selecting the ELAN or CLAN network card and entering TCP/IP information

Section B: On-server configuration

In this section

Logging on to the CallPilot server

ATTENTION   When logging on to the CallPilot server, ensure that the
CAPS key is not on. The password is case-sensitive.

To log on to the CallPilot server

1   Ensure that the CallPilot server has started and the Windows NT logon prompt
appears.

2   Press Ctrl+Alt+Delete.

Result: The Logon Information dialog box appears.

3   Type **Administrator** as the user ID.

4   Type the default password **abc123** (or the current Administrator password if it
has been changed already).

Note: You can choose to log on with a different user ID that has local
administrative privileges. After you complete the Configuration Wizard, you are
instructed to change the default passwords in Chapter 7, "Changing the
CallPilot server Windows NT default passwords."

5   Click OK.

> **Note:** If the Configuration Wizard has previously been run on the CallPilot
> server, the following dialog box might appear:
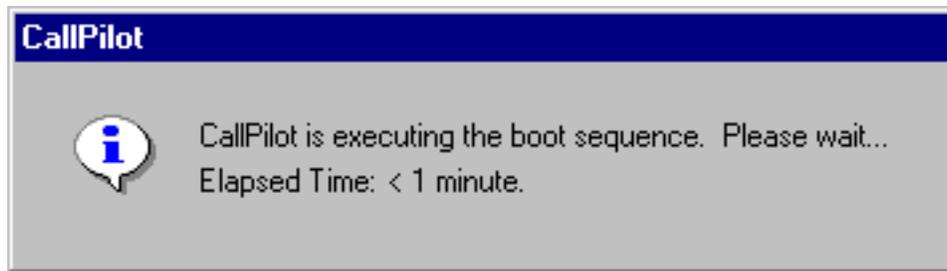
Other dialog boxes might also appear that state if CallPilot is ready to accept
calls. These dialog boxes are part of the CallPilot system ready indicator
feature and are not applicable until you have run the Configuration Wizard.

Ignore these dialog boxes and continue with "Running the Configuration
Wizard" on page 88. See "Checking that CallPilot is ready to accept calls
(System Ready Indicator)" on page 139 for more information about the system
ready indicator dialog boxes.

Running the Configuration Wizard

Requirements

- CallPilot language CD, if you are installing, adding, or upgrading languages
- completed Configuration Wizard worksheets from Part 1 of this binder
- CallPilot keycode and serial number

To prepare a keycode file

You can load a keycode from a file. To prepare the keycode file, follow these steps.

1   Create a text file (for example, use Notepad) that contains only the keycode (not the serial number). The keycode must have a space between each block of four characters, as in the following example:

    Example: 1234 5678 ABCD EFGH IJKL MNOP QRST

2   Save the file with a .kc extension.

To run the Configuration Wizard

ATTENTION   For each dialog box in the Configuration Wizard, follow the instructions in the dialog box. Use the information you recorded in the Configuration Wizard worksheets (see Part 1 of this binder). If you need additional instructions, click Help.

ATTENTION   If you are rerunning the Configuration Wizard or stepping through a prepared configuration file, some dialog boxes might be prefilled. Some dialog boxes also contain default values. If the prefilled information does not match the information planned for this server, then update any prefilled values as required.

1   Log on to CallPilot as Administrator (or any account that has administrative privileges). For detailed instructions, see "Logging on to the CallPilot server" on page 86.

2   Close all applications except for pcANYWHERE32, acdproxy, and the MASTraceWindow.

3   Double-click the Configuration Wizard shortcut on the desktop, or select Start > Programs > CallPilot > Configuration Wizard.

Result: The following dialog box appears:

4   Click Next.

Result: The Configuration Mode dialog box appears.
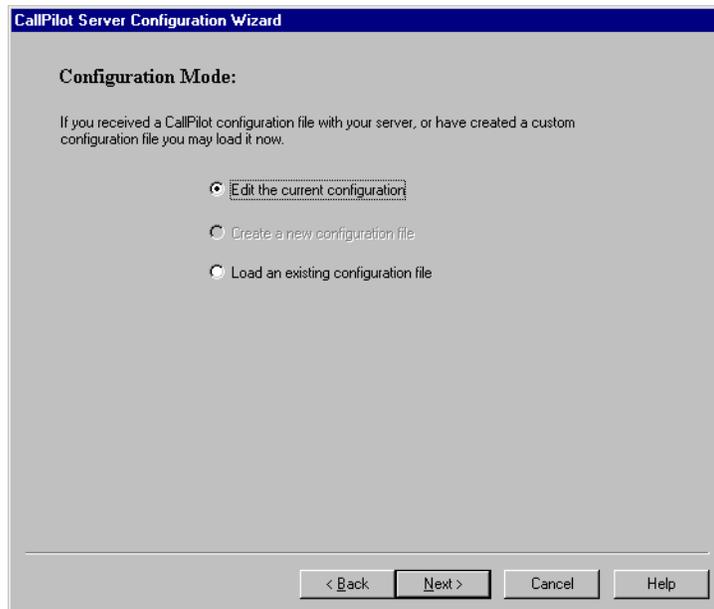
5   Select one of the following:

■   Edit the current configuration
       This option applies only to on-server configuration. Select this option if you
       did not receive or prepare a configuration file.

■ Create a new configuration file
This option applies only to off-server configuration. Select this option to prepare a new configuration file.

■ Load an existing configuration file
This option applies to on-server and off-server configuration. Select this option to load a previously prepared configuration file. If you select this option, you are prompted to locate the configuration file using a Browse dialog box.

6 Click Next.

Result: The Keycode and Serial Number dialog box appears.

Note: The keycode and serial number are printed on an 8.5" x 11" piece of paper that is packaged with the Nortel Networks CallPilot software.

Note: For upgrades, the keycode is prefilled with the value entered earlier in the upgrade procedure. Verify that the keycode is correct.

7 Enter the serial number you received with the CallPilot keycode in the Serial Number box. This number should match the prefilled Serial Number from dongle box.

Note:

■ If the serial number contains letters, use lowercase.

■ If the prefilled serial number is different from the serial number that came with the keycode, contact your Nortel Networks customer support representative and request a valid keycode and serial number or a new software feature key.

■ To complete the installation, if the prefilled serial number is different from the serial number that came with the keycode, enter the serial number that came with the keycode. After the installation is complete, you can use the voice mail system, but you cannot log on to CallPilot through the

administrative PC to perform system or maintenance activities. When you receive a new software feature key or a new serial number, rerun the Configuration Wizard to fix this problem.

8 Enter the keycode and click Next, or follow these substeps if you have a prepared keycode file:

a. Insert the floppy disk that has the keycode file.

Note: For 200i or 201i servers, you can place the prepared keycode file on a shared drive on the network that can be accessed by the 200i or 201i server.

b. Click Browse.

Result: The following dialog box appears:

c. Locate the keycode file, select it, and click Open.

d. Click Next.

Result: The Feature Verification dialog box appears.
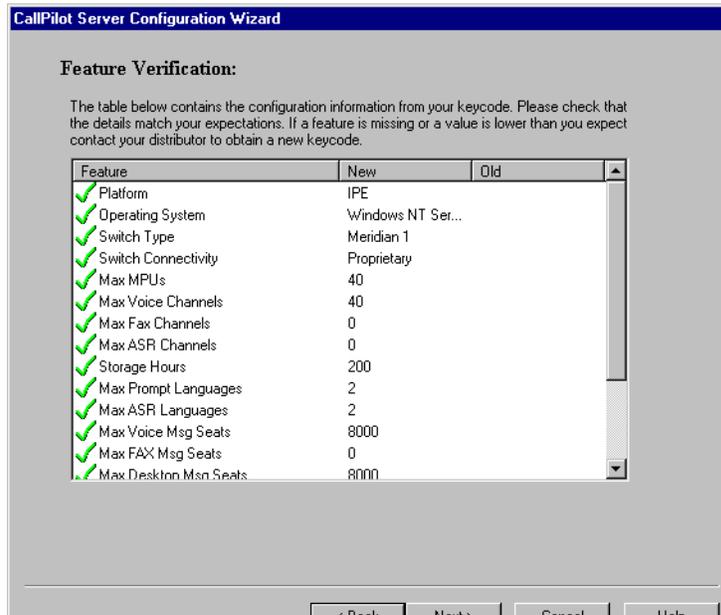
9 Verify that the features listed in the New column match the features purchased. If the features do not match what was purchased, contact your distributor.

Note: The New column lists the features indicated by the new keycode. The Old column shows what features are present based on the previous keycode or the last time the Configuration Wizard was run. If the CallPilot server has not been configured previously, then the Old column is blank. If you are rerunning the Configuration Wizard without entering a new keycode, the New and Old columns show identical features.

10 Click Next.

Result: The Customer Information dialog box appears.

11 Enter the Company Name and Customer Name. This data is for information only and does not impact the CallPilot installation.

12 Click Next.

Result: The Computer Name dialog box appears.
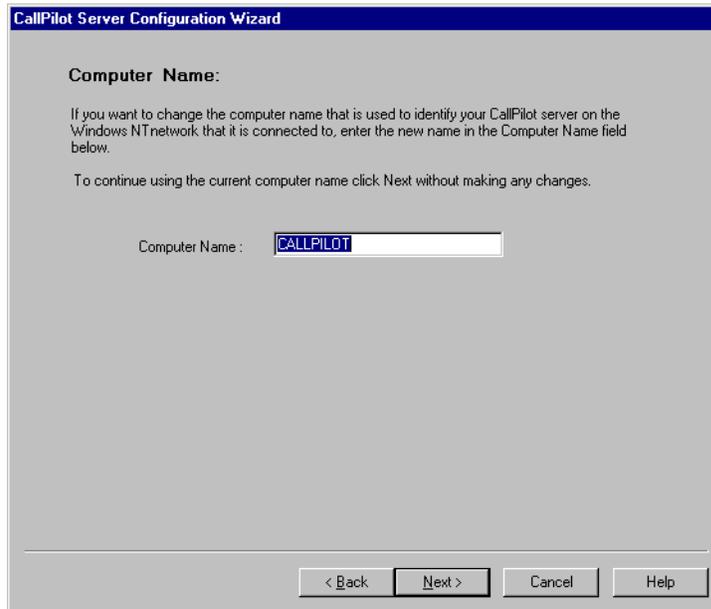
Note: This dialog box is prefilled with the current computer name.

CAUTION

Risk of incorrect computer name configuration
Do not use the Windows NT network control panel to change the computer name. It does not properly update the computer name in the CallPilot software. The Configuration Wizard makes the appropriate computer name updates for CallPilot as well as for Windows NT.

13 Enter a new computer name if the customer has requested one.

ATTENTION If you change the computer name, you must restart the server when prompted at the end of the Configuration Wizard before attempting to do any additional server configuration. If you do not restart, then any additional server configuration might not be applied properly.

14 Click Next.

Result: The Time Zone dialog box appears.
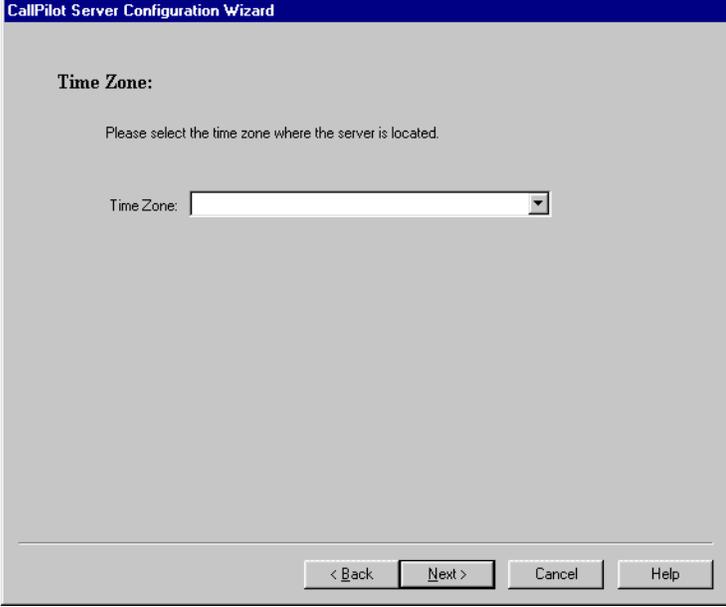
15 Select the time zone for your area from the drop-down menu.

16 Click Next.

Result: The Dialing Information dialog box appears.
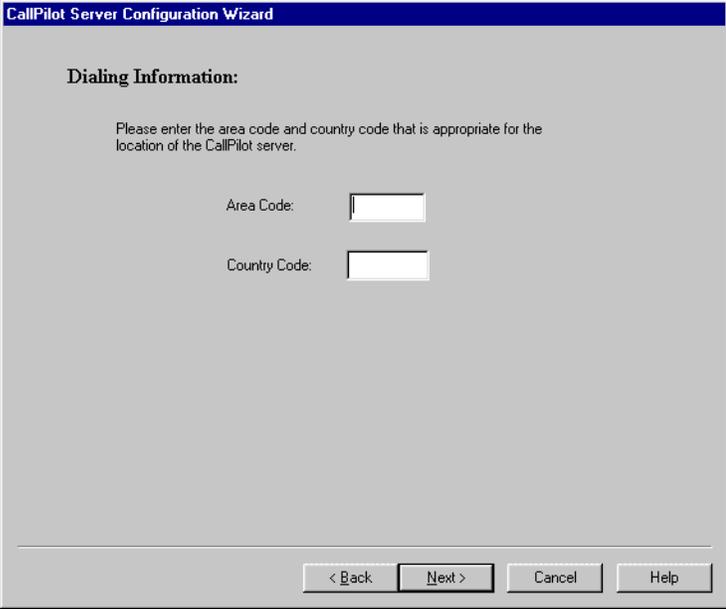
17 Enter the area and country codes, or click Next to skip this dialog box.

Note: The area and country codes are optional in the Configuration Wizard. If you do not enter them when running the Configuration Wizard, then the system administrator can enter them later from the administrative PC.

Result: The Multimedia Hardware dialog box appears.
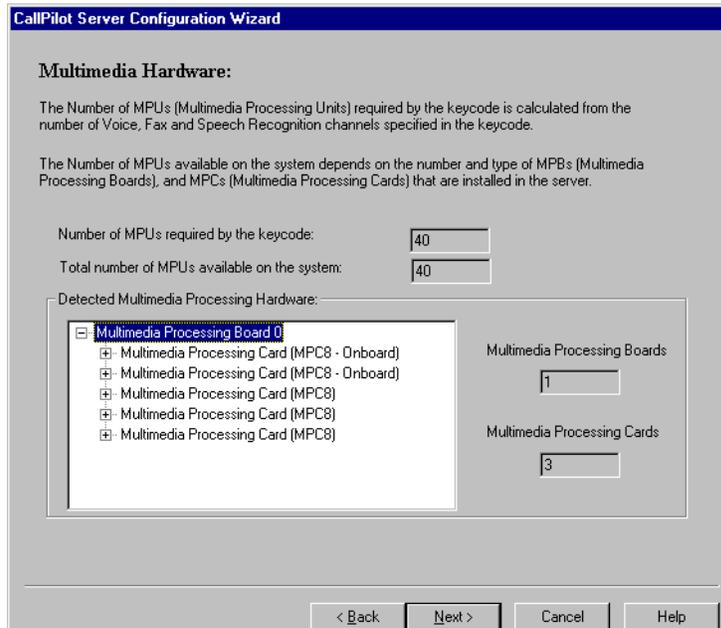
Note: This dialog box is read-only.

18 Verify that the Total Number of MPUs available on the system is equal to or greater than the Number of MPUs required by the keycode. Also, verify that the detected multimedia hardware matches what was installed in the server according to the customer order for the server.

Note: If some of the required or expected multimedia hardware is not shown in this dialog box, then the missing hardware is either not installed or is faulty. Faulty multimedia hardware is not detected by the Configuration Wizard and is not listed in this dialog box.

19 Do one of the following substeps:

a. If the required multimedia hardware is present, click Next.

b. If some multimedia hardware is missing or faulty, you can still continue with the installation and configuration to get a working system until you receive the replacement hardware. Configure only the number of DNs that match the number of physical channels present. When the additional or replacement hardware is installed, rerun the Configuration Wizard to configure the additional channels.

Result: The Media Allocation dialog box appears.
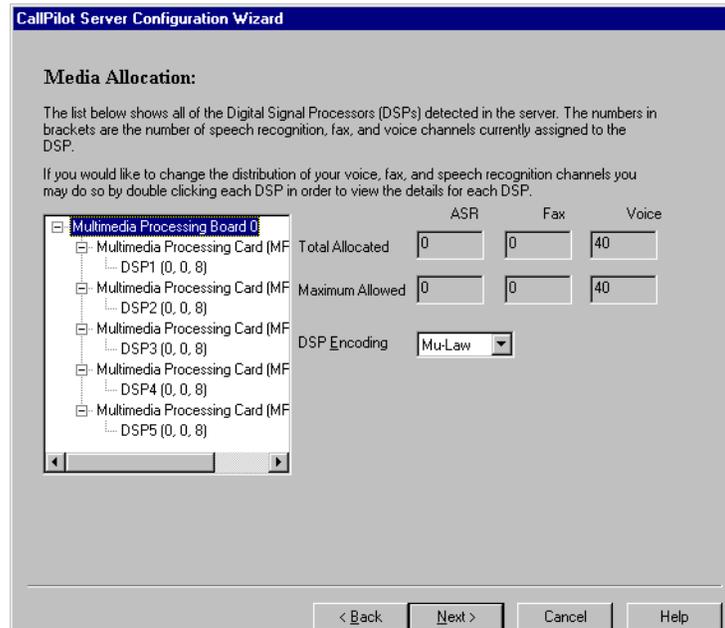
ATTENTION   By default, a new CallPilot system has the speech
                   recognition, fax, and voice channels spread out as evenly
                   as possible over all available hardware. However, if there
                   is a hardware change or keycode change that affects the
                   number of channels or the distribution of speech
                   recognition, fax, and voice channels, then you need to
                   manually allocate the additional channels.

20   Use the drop-down menu for the DSP Encoding box to select the appropriate
         DSP Encoding type for your region. For example, select Mu-law for North
         America. Select A-law for Europe and the Caribbean area.

21   To view or change the allocation of speech recognition, fax, and voice
         channels, follow these substeps:

   a.   Click the plus signs (+) in the list of hardware to see more detail about the
            allocation of DSPs.

            The MPC-8 cards are labeled as DSP1, DSP2, and so on. The allocation of
            speech recognition, fax, and voice channels on an MPC-8 card is shown as
            follows:

   Example: DSP1 (1,1,2): The first number is the number of speech recognition
   channels, the second number is the number of fax channels, and the third
   number is the number of voice channels.

   b.   Identify a DSP where you want to change the channel allocation, and
            double-click on the DSP.

Result: The following dialog box appears for viewing or changing the media allocation for the selected DSP:
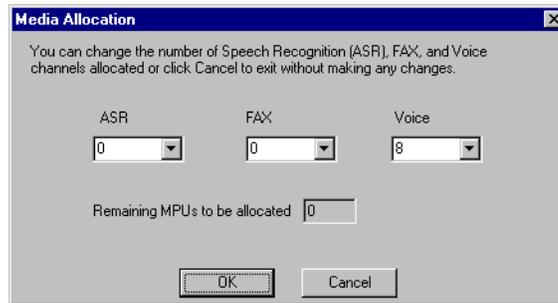
c.   Change the channel allocation and click OK.

Note: Each DSP has eight MPUs. If you select all voice, the DSP supports up to eight channels. If you select some fax or speech recognition channels, the DSP supports less than eight channels. The following table shows how many MPUs are required for speech recognition, fax, and voice channels:

Channel type	Description	# of MPUs required
Voice	One voice channel requires one MPU.	1 MPU
Fax	Fax needs twice as much processing power as voice-only media and, therefore, requires two MPUs.	2 MPUs
ASR (speech recognition)	Speech-recognition needs four times as much processing power as voice-only media and, therefore, requires four MPUs.	4 MPUs

22 Click Next.

Result: The Hunt Group or CDN Information dialog box appears.

```
CallPilot Server Configuration Wizard

    Hunt Group or CDN Information:


              Please enter your Voice Messaging DN.

                 Primary DN          ┌──────────┐
                 (Voice Messaging)    │          │
                                      └──────────┘










                              ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐
                              │ < Back │ │ Next > │ │ Cancel │ │  Help  │
                              └────────┘ └────────┘ └────────┘ └────────┘
```

23   Enter the primary DN for Voice Messaging and click Next.

The DN you enter here is the DN that is used to test CallPilot after the installation. This test is described in "Verifying that CallPilot can receive calls" on page 145.

Result: The Language Source Directory dialog box appears.

```
CallPilot Server Configuration Wizard

    Language Source Directory:
        In order to install or upgrade prompt languages, and install new speech recognition languages
        you must have a CallPilot language CD.

        Click Browse and locate the language CD. Select the drive letter of the language CD or select
        the root directory of the language CD. Do not select subfolders or files on the language CD.

        If you do not want to make any changes to the languages installed on the server, select Skip
        Languages installation, and Click Next to continue.


        ⦿ Install Language
            Language CD Location ┌──────────────────────────┐  ┌────────┐
                                 │                          │  │ Browse │
                                 └──────────────────────────┘  └────────┘
        ○ Skip Languages installation

        WARNING: You must have at least one prompt language on your server before CallPilot will
                 be able to function. The configuration wizard can be re-run to add the language
                 at a later point in time.






                              ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐
                              │ < Back │ │ Next > │ │ Cancel │ │  Help  │
                              └────────┘ └────────┘ └────────┘ └────────┘
```

The Install Language option enables you to do one or more of the following:

■   Reinstall or upgrade languages to ensure you have the latest version.

- Install new prompt languages.

- Select the primary and secondary languages.

- Install new speech recognition languages.

Note: The primary language is the language used by default for system prompts and system greetings. If a secondary language is installed, users can request that the secondary language be used for their mailboxes. For more information about the administration of languages, refer to the *Administrator's Guide*.

Note: Each language adds approximately 10 minutes to the time required to apply changes at the end of the Configuration Wizard. However, if you are unsure if the latest language prompt set has been installed, select Install Language.

24 To do any of the language installation options described above, follow these substeps:

   a. Insert the CallPilot Language CD.

   b. Select Install Language.

   c. Click Browse and select the CD-ROM drive.

   Note: Select the root level of the CD-ROM. Do not select subfolders or files on the CD. For example, if the CD-ROM is drive Z, just select Z.

   d. Click Next.

   Result: If languages are already installed, the following dialog box appears:
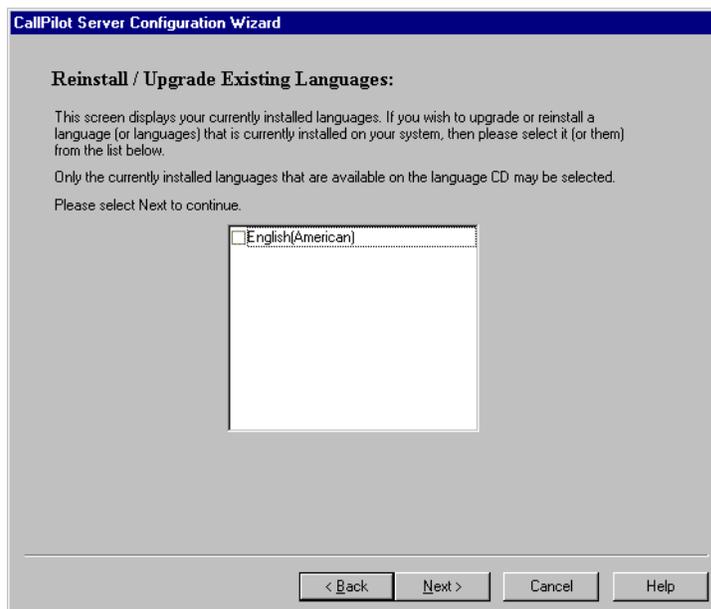
   e. If you are reinstalling or upgrading a language, then select it and click Next. To skip the dialog box, click Next without selecting anything.

Result: The following dialog box appears:
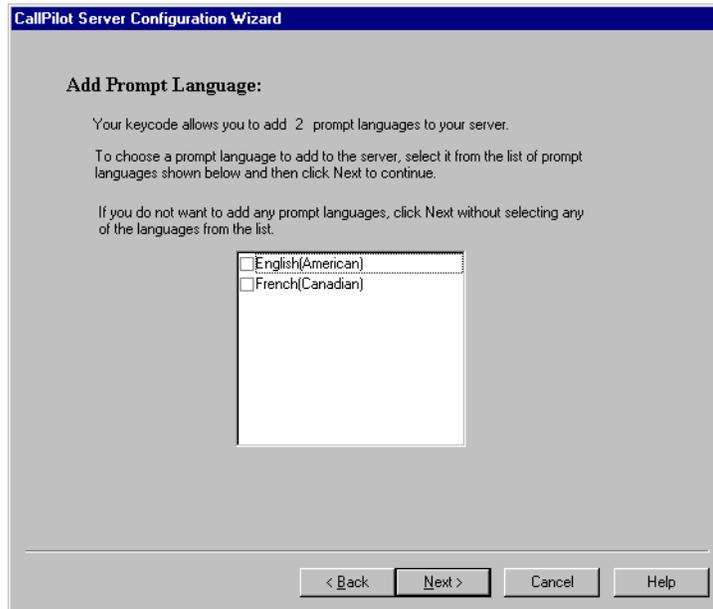
f. If you are adding a language, then select it and click Next. To skip the dialog box, click Next without selecting anything.

Result: The following dialog box appears:
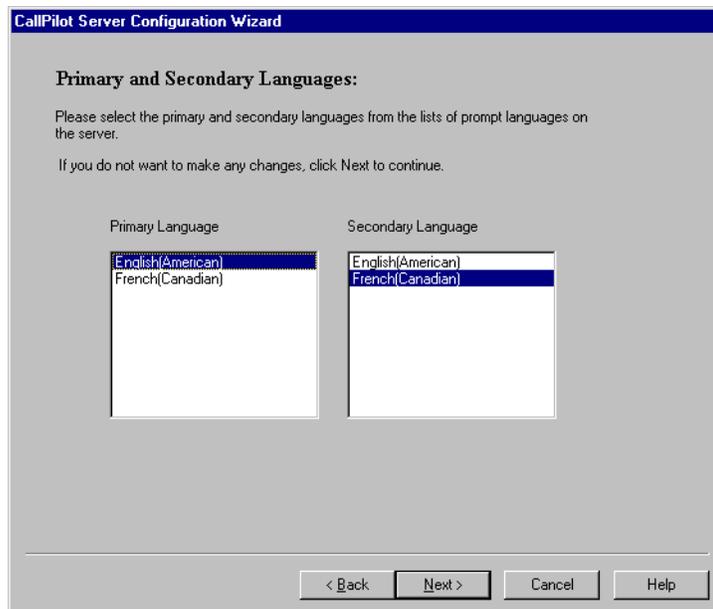
Note: If you have only one language, then it is the primary language by default. If you have two or more languages, then all languages are listed in both the Primary and Secondary columns.

g. In the Primary Language column, select the language you want to be primary.

h. In the Secondary Language column, select the language you want to be secondary.

i. Click Next.

Result: The following dialog box appears:
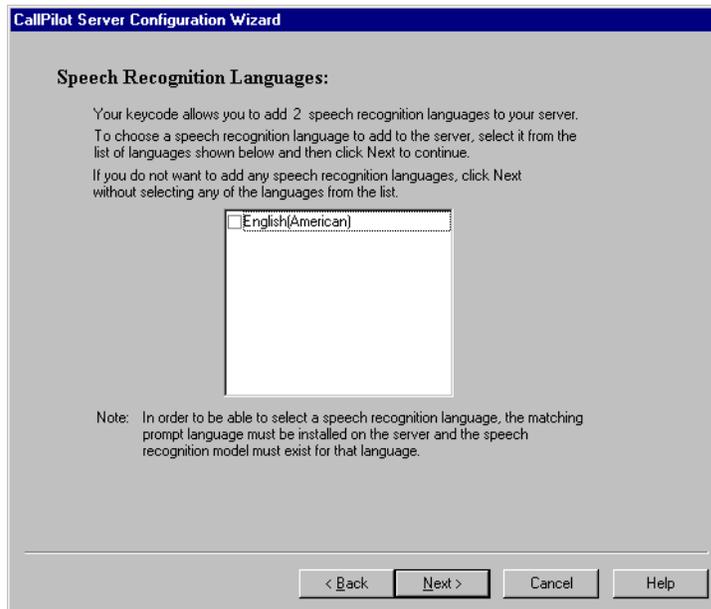
j. If you are adding a speech recognition language, then select it and click Next. To skip the dialog box, click Next without selecting anything.

Result: The language installation dialog boxes are completed. The CallPilot Networking dialog box appears.
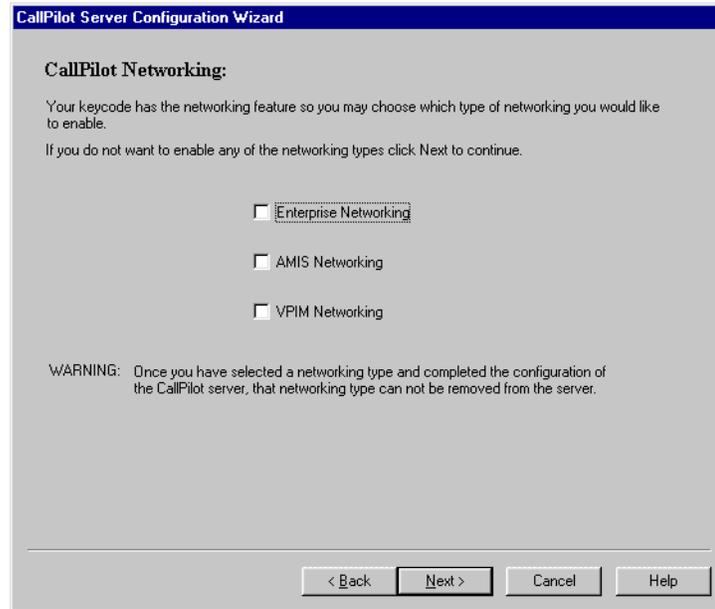
Tip: For an overview of these networking options, click Help.

ATTENTION Once a type of networking is installed, it cannot be uninstalled. Therefore, select only the networking solution or solutions that are required. You can add additional networking solutions at any time by rerunning the Configuration Wizard. However, if you rerun the Configuration Wizard and make changes, you must restart the CallPilot server.

25 Select the networking type requested by the customer.

26 Click Next.

Result: The Equipment LAN NIC dialog box appears.
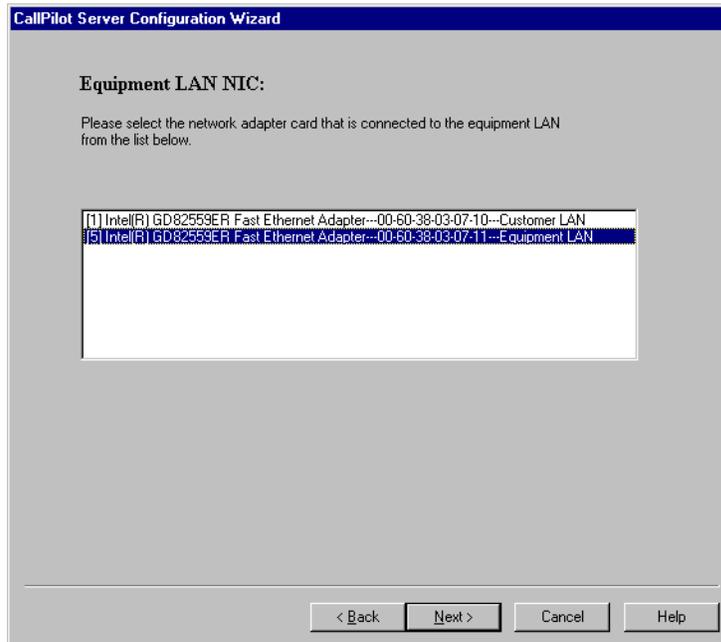
27 Identify the ELAN card as follows:

- For the 200i server, select the card labeled "Equipment LAN."

   Note: For the 200i server, the Configuration Wizard identifies the ELAN card as the integrated network card on the motherboard and displays the text "Equipment LAN" beside the network card name and MAC address.

- For the 201i server, select the card that is labeled "[5]".

   Note: The next time you run the Configuration Wizard, the card you selected as the ELAN card is identified as "Equipment LAN" in this dialog box.

- For tower or rackmount servers, use the MAC address (the series of numbers beside the network card name) in the dialog box to determine which card you should select for the ELAN. The MAC address is on the network card backplate and is visible through the backplane of the server.

   Note: The next time you run the Configuration Wizard, the card you selected as the ELAN card is identified as "Equipment LAN" in this dialog box.

28 Click Next.

Result: The Equipment LAN dialog box appears.

29 Enter the IP Address and Subnet Mask that were planned for this CallPilot server in the Configuration Wizard worksheets.

30 Click Next.

Result: The Meridian 1 Switch Information dialog box appears.

31 Enter the ELAN IP address of the switch. This is the same IP address used in the switch programming. See "Configuring switch IP addresses and enabling the Ethernet interface" on page 41.

32   For the switch type, select M1 for all Meridian 1 switches except for the Option 11.

33   In the Switch Customer Number box, enter the customer number on the switch to which this CallPilot server belongs. The default is 0.

34   Click Next.

   Result: The Meridian 1 TN Configuration dialog box appears.
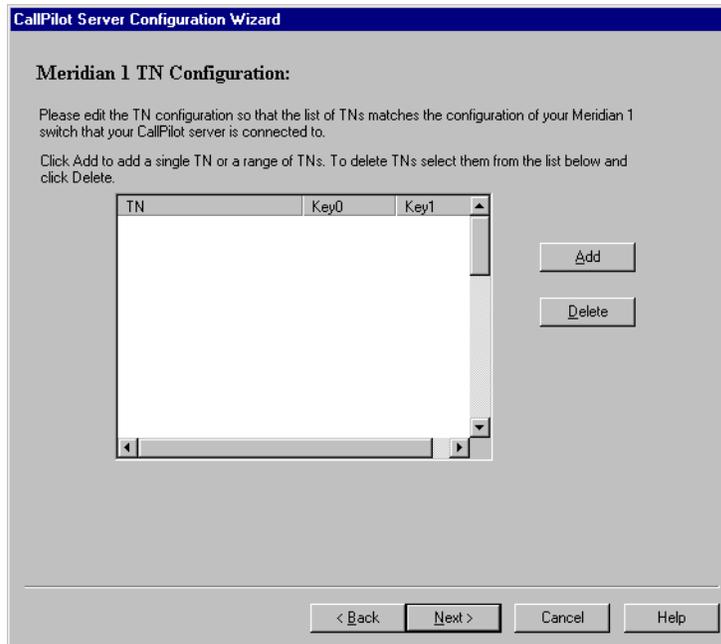
   Tip: To save time, you can add a range of TNs instead of adding them one at a time if you have consecutively numbered TNs programmed for CallPilot. For example, if the first consecutive TN is 1.0.0.0 and you specify 20 TNs in the range, the last TN that is added to the TN Table is 1.0.0.19.

   Tip: For column and box descriptions, click Help.

   Note: The number of TNs configured on CallPilot cannot exceed the number of channels specified by the keycode.

35   To add TNs, click Add.

Result: The following dialog box appears:

TN Configuration

Select the number of TNs that you would like to add to the server and then enter the details about the starting TN. If you are adding more than one TN the details for the remaining TNs will be filled in automatically.

Number of TNs: 0

Start TN

	Loop	Shelf	Card	Unit
TN:	0	0	0	0

Key 0: 0   (Position ID)

Key 1: 0   (SCN)

OK   Cancel

36 Fill in the TN information.

To add a range of TNs, do the following:

a. Enter the number of TNs in the range.

b. Enter the TN, Key 0, and Key 1 for the first TN in the range.

Example:

TN Configuration

Select the number of TNs that you would like to add to the server and then enter the details about the starting TN. If you are adding more than one TN the details for the remaining TNs will be filled in automatically.

Number of TNs: 14

Start TN

	Loop	Shelf	Card	Unit
TN:	0	0	11	0

Key 0: 4000   (Position ID)

Key 1: 5000   (SCN)

OK   Cancel

Note: For Option 11 switches, the first two boxes for the TN are grayed out and prefilled.

37 Click OK.

Result: The Meridian 1 TN Configuration dialog box appears with the added data.
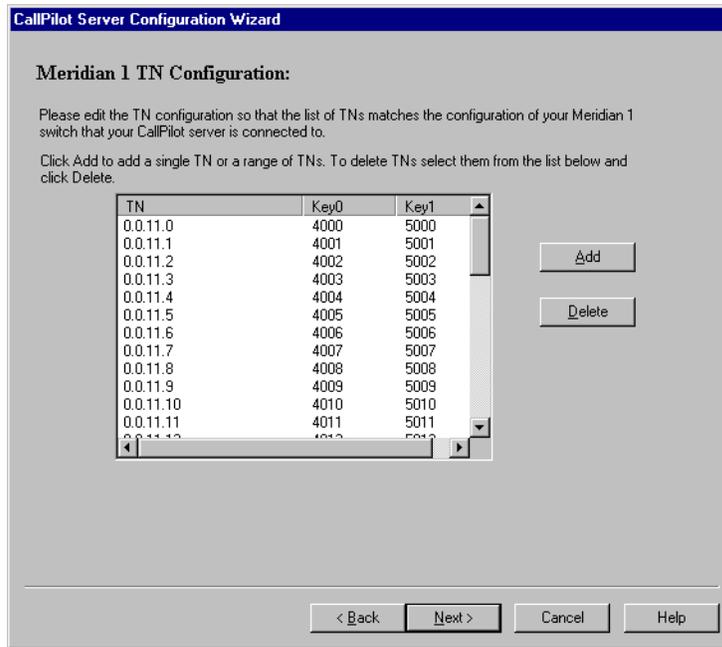
38 Click Next.

Result: The Customer LAN NIC dialog box appears.
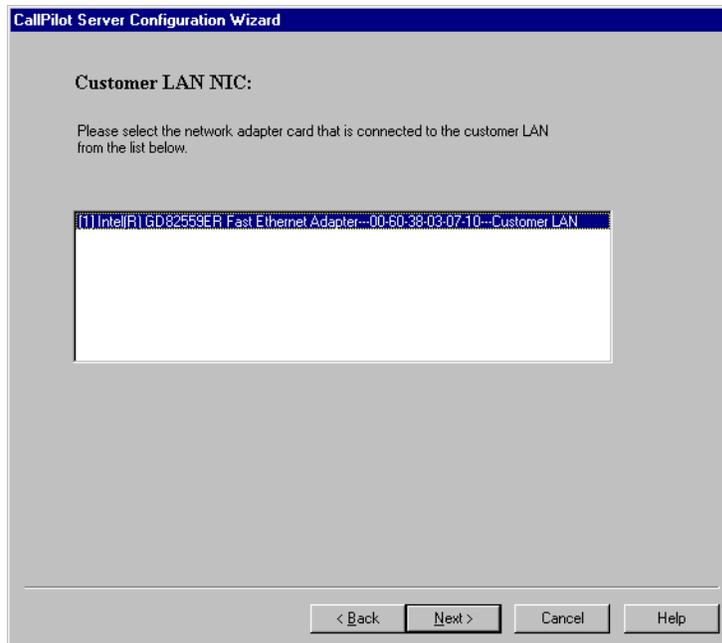
39 Identify the CLAN card as follows:

■ For the 200i server, select the card labeled "Customer LAN."

■ For the 201i server, select the card that is labeled "[1]".

   Note: The next time you run the Configuration Wizard, the card you selected as the CLAN card is identified as "Customer LAN" in this dialog box.

■ For tower or rackmount servers, use the MAC address (the series of numbers beside the network card name) in the dialog box to determine which card you should select for the CLAN. The MAC address is on the network card backplate and is visible through the backplane of the server.

   Note: The next time you run the Configuration Wizard, the card you selected as the CLAN card is identified as "Customer LAN" in this dialog box.

40 Click Next.

   Result: The Customer LAN dialog box appears.

41 Enter the IP Address, Subnet Mask, and Gateway that were planned for this CallPilot server in the Configuration Wizard worksheets.

42 Click Next.

Result: The Ready to Configure the Server dialog box appears.
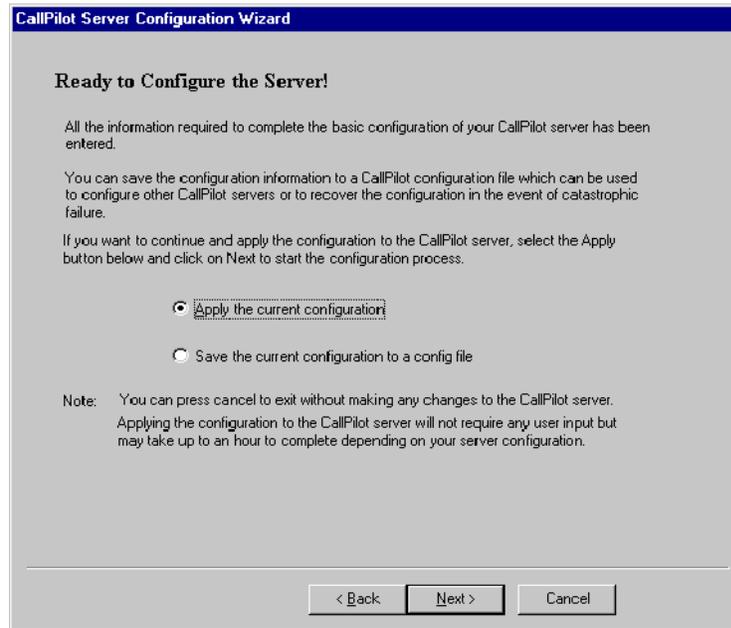
43 To apply the configuration changes, see "To apply the current configuration" below.

To save the configuration to a configuration file for use at a later time to configure a CallPilot server, see "To save the current configuration to a config file" on page 111.

To apply the current configuration

Use this procedure to configure CallPilot based on your entries in the Configuration Wizard.

Note: When you apply the configuration changes, CallPilot is temporarily taken out of service. You must restart the CallPilot server after the configuration changes are applied.

1 Select Apply the current configuration. To leave the server configuration as it was before you ran the Configuration Wizard, click Cancel.

2 Click Next.

Result: You are prompted to confirm that you want to continue.

3 Click Yes.

Result: The configuration changes are applied to the server.

Note: The configuration changes take approximately 10 minutes, plus an additional 10 minutes for each language you are adding or upgrading.

4 Click Finish. Then click OK.

5 Restart the server as follows:

a. Press Ctrl+Alt+Delete.

    b.   Click Shut Down.

    c.   Select Shutdown and Restart.

    d.   Click OK.

        Result: You might be informed that an SQLAnywhere service is running with connections, and asked if you want to end it.

    e.   Click Yes or End Task.

        Result: You might also be asked if you want to save ACD proxy changes.

    f.   Click No.

        Result: The server restarts.

Note: After the server restarts and you log on to CallPilot, the system ready indicator dialog boxes appear. These are described in "Checking that CallPilot is ready to accept calls (System Ready Indicator)" on page 139.

What's next?

Continue with Chapter 7, "Changing the CallPilot server Windows NT default passwords," on page 113.

Note: If you are upgrading from an earlier CallPilot release, return to the upgrade procedure.

To save the current configuration to a config file

Use this procedure to create a configuration file to be used to configure CallPilot servers.

1   Select Save the current configuration to a config file.

2   Click Next.

    Result: The Save As dialog box appears showing the default directory.

3   Save the configuration file to a floppy disk or to a network drive that can be accessed by the CallPilot server you intend to configure.

Result: If you are running the off-server Configuration Wizard, this step completes the wizard. If you are running the Configuration Wizard on the CallPilot server, the Ready to Configure the Server dialog box appears.

4   Click Cancel to exit the Configuration Wizard.

Chapter 7

Changing the CallPilot server Windows NT default passwords

In this chapter

Changing the CallPilot server Windows NT default passwords

Introduction

To maintain system security, change passwords regularly and store them in a secure location. The accounts described here are used to log on to Windows NT on the CallPilot server. These are not the accounts used to log on to a CallPilot system from the Administrative client PC.

Default accounts and passwords

The following accounts are created during the installation procedures at the factory. You are strongly encouraged to create your own passwords for the Administrator, NGenDist, and NGenDesign accounts. NGenDist and NGenDesign are Remote Access accounts. For the NGenSys account, the customer decides whether to change the password.

Account	Default password	Intended use for this account
Administrator	abc123	This account has administrative privileges and can be used for configuring the server.
NGenSys	not disclosed for security reasons	An alternate Administrator account
NGenDist	not disclosed for security reasons	Distributor support
NGenDesign	not disclosed for security reasons	Nortel Networks technical support

When to change passwords

Change the passwords at the following times:

- during the initial system setup
- at regular intervals for maximum security
- if you experience trouble logging on to the CallPilot server
- if server software is reinstalled (the default accounts and passwords are recreated, so passwords must be changed)

Note: If you require support from Nortel Networks or your distributor, you must tell them the new passwords.

Password guidelines

Write down any new passwords and store them in a secure place for future reference. Passwords are case-sensitive.

New passwords should be

- unique
- alphanumeric (they should contain at least one number)
- a minimum of six characters

Note: Do not use words that appear in the dictionary.

Example

xyd45fst (do not use this as your password)

To change the Administrator password

1   Log on to the server as Administrator.

2   Press Ctrl+Alt+Delete.

   Result: The Windows NT Security dialog box appears.
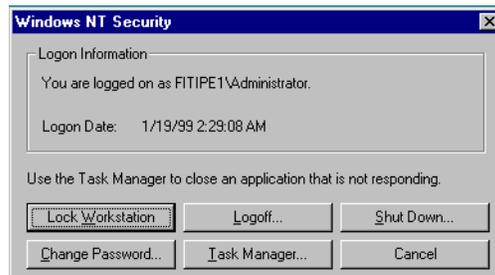
3   Click Change Password.

   Result: The Change Password dialog box appears.

4   In the Old Password box, enter the current password.

5   In the New Password box, enter the new password.

   Note: Ensure the password meets the requirements described above in "Password guidelines."

6   In the Confirm New Password box, enter the new password again.

7   Click OK.

    Result: A dialog box appears indicating that the password has been successfully changed.

8   Click OK.

    Result: You are returned to the Windows NT Security dialog box.

9   Click Cancel to close the Windows NT Security dialog box.

10 Record the password and store it in a safe, secure place away from the server.

To change the NGenDist and NGenDesign (and optionally NGenSys) passwords

Note: Whether you also use this procedure to change the NGenSys account password is the customer's decision. If you do change the NGenSys password, you must apply the same password change to the MAS Backup/Restore service as described in "To change the NGenSys password for MAS Backup/Restore service" on page 117.

1   Log on to the server as Administrator.

2   Click Start > Programs > Administrative Tools (Common) > User Manager for Domains.

    Result: The User Manager window displays a list of available user accounts, including NGenDist and NGenDesign.

3   Double-click the NGenDist icon.

    Result: The User Properties window appears.

4   In the Password box, type the new password.

    Note: Ensure that you use a password that contains a combination of numbers and letters (see "Password guidelines" on page 115).

5   In the Confirm Password box, type the same password entered in the Password box.

6   Click OK to close the User Properties window.

7   Repeat steps 3 to 6 for NGenDesign.

8   Click Exit to save changes.

9   Record these passwords and store them in a safe, secure place away from the server.

    Note: If you have changed the NGenSys password, continue with "To change the NGenSys password for MAS Backup/Restore service" on page 117.

To change the NGenSys password for MAS Backup/Restore service

Note: Follow this procedure only if you change the Windows NT user account password for NGenSys. The NGenSys password for MAS Backup/Restore service must be the same as the password for the Windows NT NGenSys user account.

1   Click Start > Settings > Control Panel.

2   Double-click Services.

Result: The Services dialog box appears.
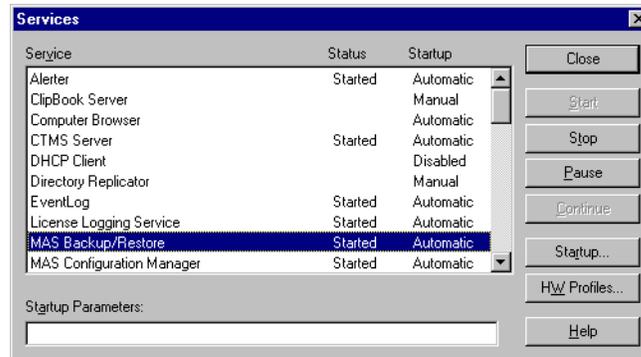
3   Scroll to MAS Backup/Restore and select it.

4   Click Startup.

Result: The following dialog box appears:
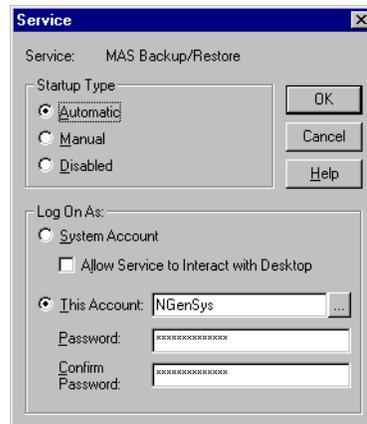
5   In the Log On As section, fill in the Password and Confirm Password boxes with the current NGenSys password.

Note: Use the same password you assigned to NGenSys in "To change the NGenDist and NGenDesign (and optionally NGenSys) passwords" on page 116.

What's next?

Continue with Chapter 8, "Configuring Remote Access Service," on page 119.

Chapter 8

Configuring Remote Access Service

In this chapter

Configuring Remote Access Service

To configure the Remote Access Service

Note: The CallPilot server Remote Access Service (RAS) requires a pool of IP addresses to grant dial-in privileges to remote clients. Remote Access Service needs a range of IP addresses that includes at least two available IP addresses. The Remote Access Service uses the first IP address. The remaining IP addresses are loaned to each dial-in client.

1   Click Start > Settings > Control Panel.

2   Double-click the Network icon.

   Result: The Network dialog box appears.

3   In the Network dialog box, click the Services tab.

   Result: The Services tab appears.
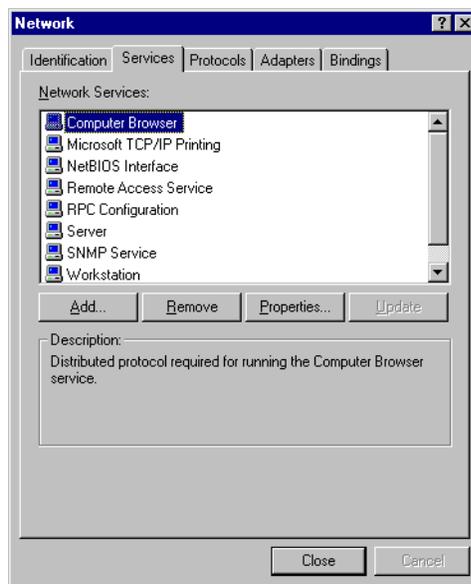
4   Select Remote Access Service, and then click Properties.

Result: The Remote Access Setup dialog box appears.

Remote Access Setup

Port	Device	Type
COM1	Dial-Up Networking Serial Ca...	Modem (unimodem)

Continue
Cancel
Network...
Help

Add... Remove Configure... Clone
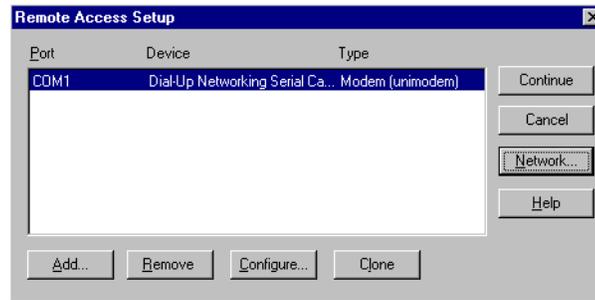
5 Click Network.

Result: The Network Configuration dialog box appears.

Network Configuration

Dial out Protocols:
☐ NetBEUI
☐ TCP/IP
☐ IPX

OK
Cancel
Help

Server Settings:
Allow remote clients running:
☐ NetBEUI   Configure...
☑ TCP/IP   Configure...
☐ IPX   Configure...

Encryption settings:
○ Allow any authentication including clear text
○ Require encrypted authentication
● Require Microsoft encrypted authentication
    ☐ Require data encryption

☐ Enable Multilink
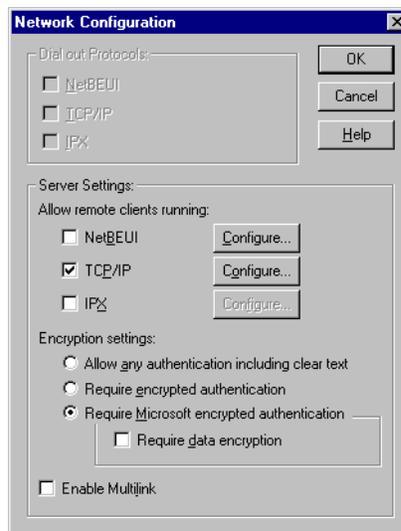
6 In the Server Settings section, select TCP/IP.

7 If NetBEUI is checked, clear it.

8 Click TCP/IP Configure.

Result: The RAS Server TCP/IP Configuration dialog box appears.
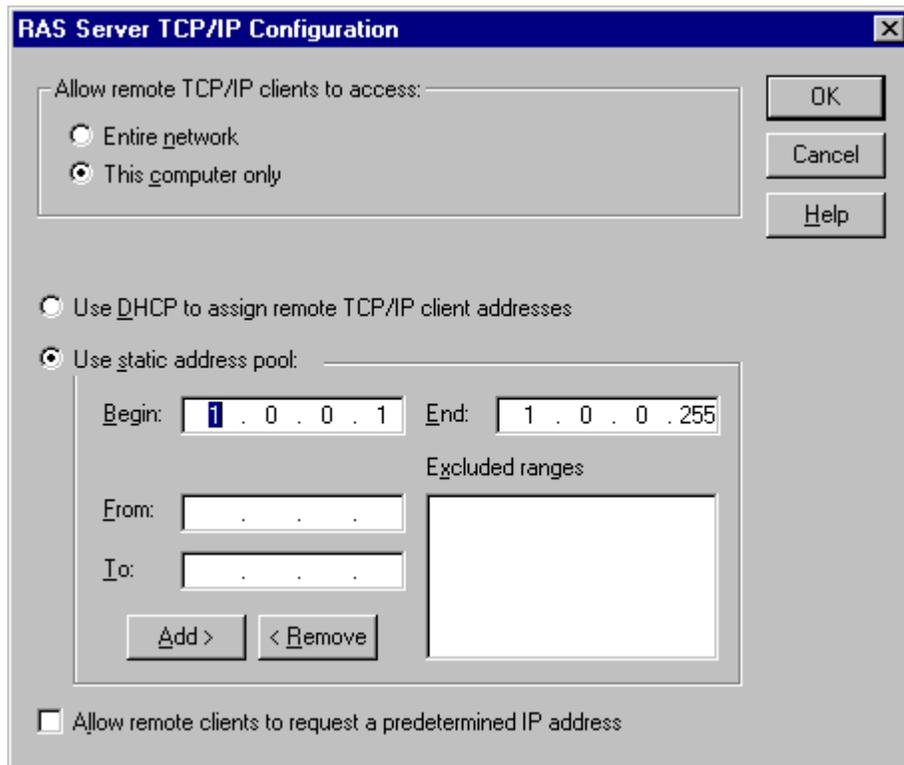
9 Click This computer only.

10 Click Use static address pool.

11 Enter the range of IP addresses in the Begin and End boxes.

Note: The range has to include a minimum of two IP addresses, and the range of IP addresses must come from a valid ELAN or CLAN range of IP addresses. Use the From and To boxes and the Add and Remove buttons to exclude one or more IP address ranges.

12 Ensure that the Allow remote clients to request a predetermined IP address is not checked.

13 Click OK to close the RAS Server TCP/IP Configuration dialog box.

Result: The Network Configuration dialog box reappears.

14 Click OK.

Result: The Remote Access Setup dialog box reappears.

15 Click Continue.

Result: The Network dialog box reappears.

16 Continue with "To save the network settings" on page 123.

To save the network settings

1 In the Network dialog box, click OK.

   Result: You might be prompted with a warning indicating that at least one installed NIC contains an empty primary WINS address. Ignore this by clicking Yes. You are then asked if you want to restart your computer.

2 Click Yes to restart the CallPilot server.

   Result: You might be informed that an SQLAnywhere service is running with connections, and asked if you want to end it.

3 Click Yes.

   Result: You might also be asked if you want to save ACD proxy changes.

4 Click No.

   Result: The CallPilot server restarts.

5 Continue with "To configure the Remote Access Service modem" below.

To configure the Remote Access Service modem

1 In the Control Panel, double-click Modems.

   Result: The General property page appears.
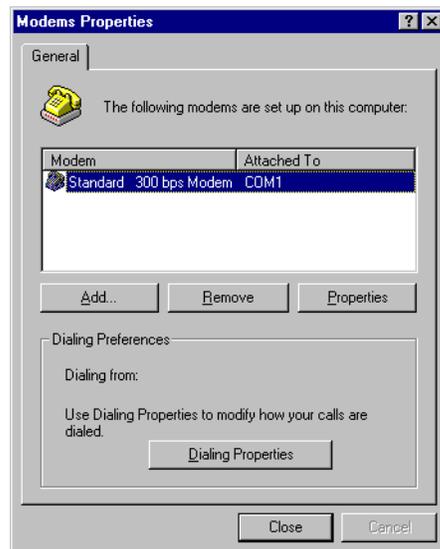
2 If a modem is listed and it matches the actual modem installed, then exit from the Modems control panel.

3 If a modem is listed and it does not match the actual modem installed, select it and click Remove.

Result: You are prompted with a message similar to the following message:
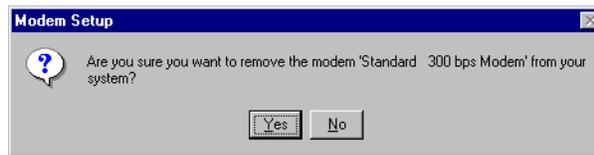
4 Click Yes.

5 Click Add to add the correct modem.

Result: The Install New Modem panel appears.
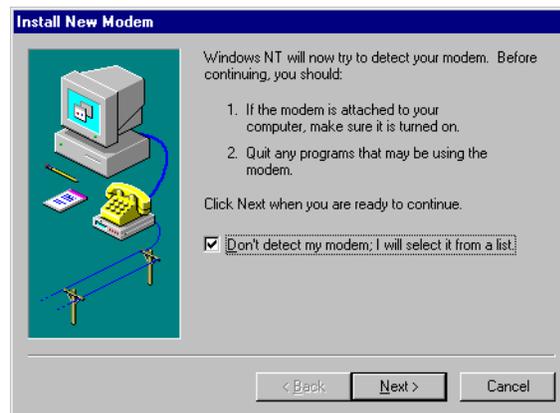
6 Check the Don't detect my modem; I will select it from a list box.

7 Click Next.

Result: The system prompts you to select your modem.
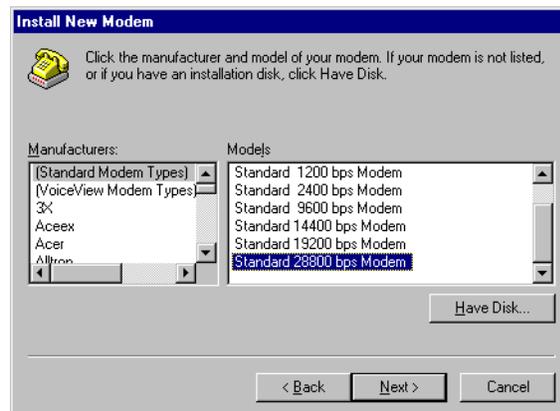
8 Select the type of modem installed on the server, and then click Next.

Note: If your modem is not listed, select the Standard 28800 bps Modem.

Result: The following dialog box appears.
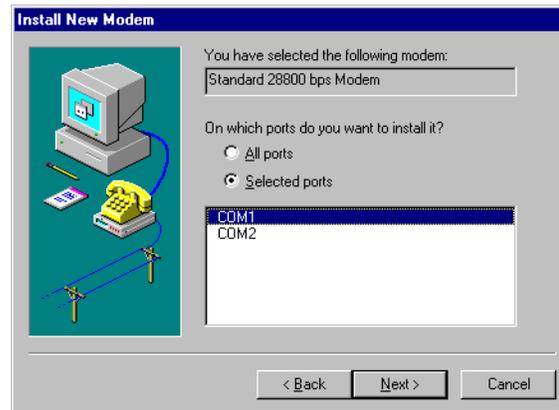
9   Click COM1, and then click Next.

Result: The following dialog box appears.

10   Click Finish to complete installing the modem.

11   Continue with "To modify Dial-Up Networking" on page 126.

To modify Dial-Up Networking

This procedure is a continuation of "To configure the Remote Access Service modem" on page 123.

1   Close the Modem Control Panel.

Result: The system prompts you for changes to Dial-Up Networking because the modem has changed.
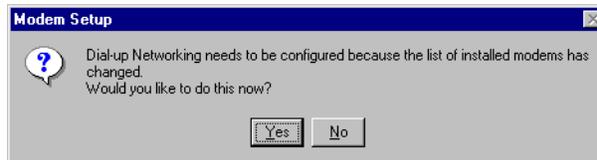
2   Click Yes to continue.

Result: The Remote Access Setup dialog box appears.
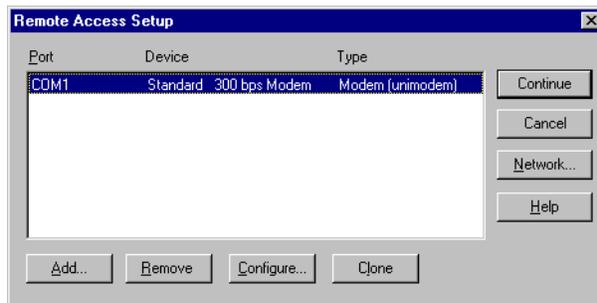
3   Select the old modem listed (usually on COM1).

4   Click Remove.

Result: The following window appears.

5   Click Yes to confirm that you want to remove the modem.

6   Click Add.

Result: The Add RAS Device dialog box appears.
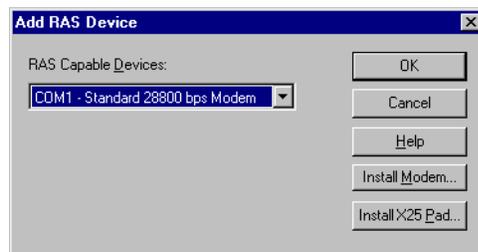
7   Select the installed modem from the drop-down list, and then click OK.

Result: The Remote Access Setup dialog box appears.
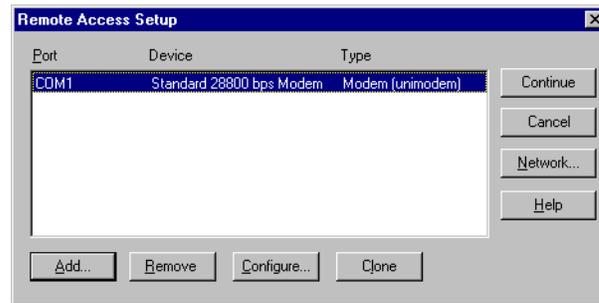
8   Click Continue to save the changes.

Result: The system prompts you to restart the CallPilot server.
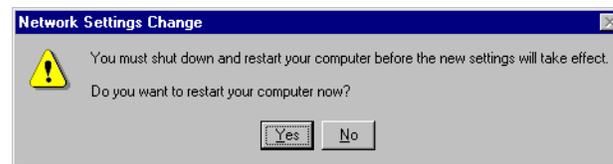
9   Click Yes to restart the CallPilot server.

What's next?

Continue with Chapter 9, "Preparing the server for remote access with pcANYWHERE32," on page 129.

Chapter 9

Preparing the server for remote access with pcANYWHERE32

In this chapter

Overview

Introduction

With pcANYWHERE32, you can perform advanced administrative tasks on the server from a remote PC. You can control the server as though you were directly connected to the server.

One licensed copy of pcANYWHERE32 Version 8.0 is provided for the server on the CallPilot Server CD. pcANYWHERE32 is installed at the factory, but you must verify its configuration.

To install pcANYWHERE32 Version 8.0 on the administrative client PC, you must purchase a separate license for the administrative client PC. For instructions on how to install and configure pcANYWHERE32 on the administrative client PC, refer to the *Monitoring and Security for the Administrator* guide.

Configuring pcANYWHERE32

Introduction

This section describes how to configure pcANYWHERE32 to accept remote callers.

ATTENTION

pcANYWHERE32 might already be configured when you first receive your server. If so, then go through the procedures to ensure that the network icon and remote caller settings are correct. Then go to "Changing pcANYWHERE32 caller passwords" on page 136.

Windows NT NGenDist account (user ID) and the pcANYWHERE remote PC caller CallPilotDist account

To log on to the CallPilot server from a remote PC, the distributors use the Windows NT NGenDist account to log on to CallPilot. Then they use the pcANYWHERE32 remote PC caller CallPilotDist account to access pcANYWHERE32 to control the server.

NortelSupport pcANYWHERE32 remote PC caller account

The NortelSupport pcANYWHERE32 remote PC caller account is created at the factory and is password-protected. It is created automatically during the CallPilot server software installation by the CallPilot setup program. Its purpose is to ensure that a remote PC caller account is present for Nortel Networks product support if needed.

Password recommendations

Use the same password for the pcANYWHERE32 CallPilotDist caller account that you defined for the Windows NT NGenDist (Distributor) account. This simplifies the remote logon process.

Maintaining remote access security

To maintain remote access security, change the password for the CallPilotDist caller account regularly. Continue to match the pcANYWHERE32 remote PC caller password for CallPilotDist to the Windows NT user account password for NGenDist.

To configure the network icon and remote PC caller accounts

1   Click Start > Programs > pcANYWHERE32 > pcANYWHERE.

2   Select Be a Host.

3   Click the Network icon to highlight it.

4   Right-click the Network icon and select Properties from the pop-up menu.

   Result: The NETWORK Properties dialog box appears.

5   Click the Connection Info tab.

6   Ensure that only TCP/IP is checked, as in the following example:
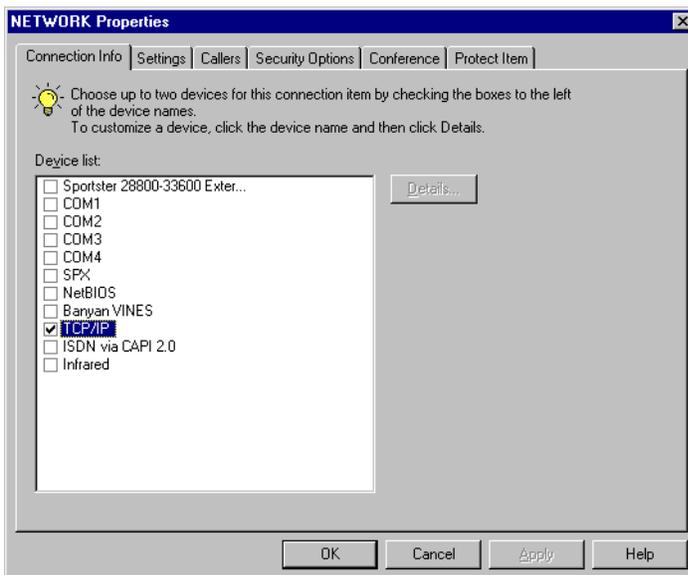
7   Click the Settings tab.

8   Ensure that settings are as shown in the following example:
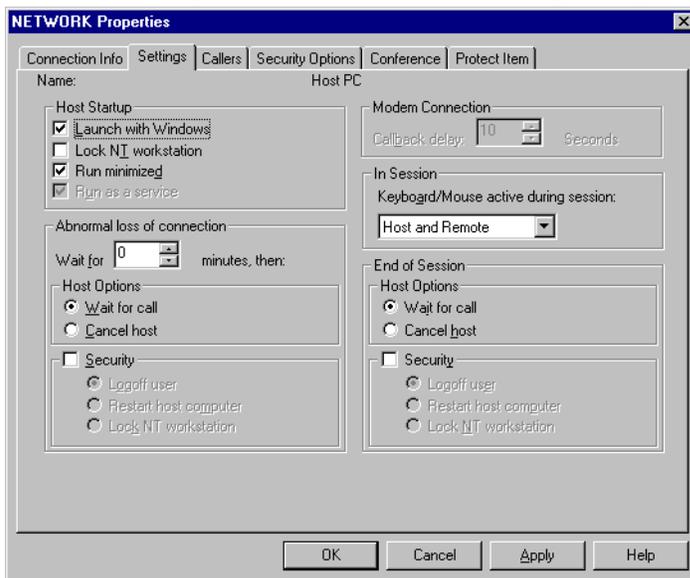
9   Click the Callers tab.

     Note: If the CallPilotDist caller icon has already been created, go to step 18.

10   Select Specify individual caller privileges, as in the following example:
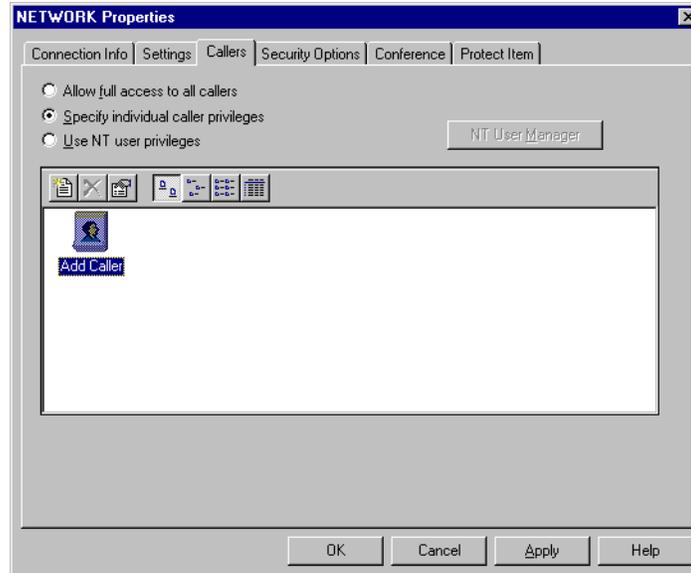
11   Double-click Add Caller**.**

     Result: The New Caller Wizard window appears.

12   Type **CallPilotDist** as the name for the caller, and then click Next.

13   Type **CallPilotDist** for the logon name.

14   In the Password box, type a new CallPilotDist password.

15   In the Confirm Password box, type the new CallPilotDist password again.

16   Click Next.

17   Click Finish.

     Result: The Network Properties dialog box appears.

18   Click the Security Options tab.

19 Ensure that settings are as shown in the following example:
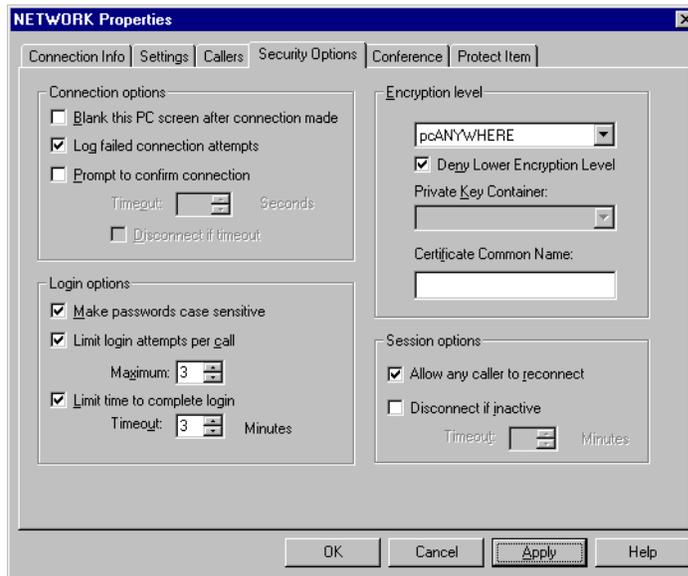
20 Click the Conference tab.

21 Ensure that Enable conferencing and Obtain IP address automatically are
selected, as shown in the following example:
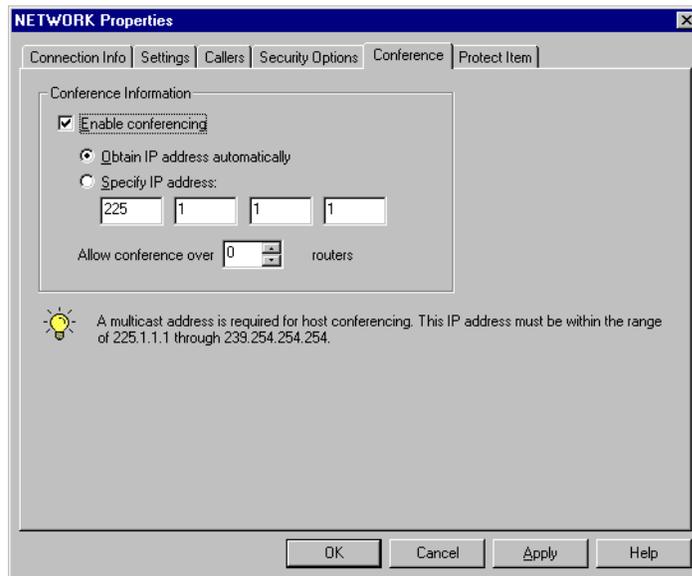
22 Click the Protect Item tab.

Note: If you want to assign a password to control who can modify the Network
icon settings, then enter a password on this screen.

23 Click OK to apply all pcANYWHERE32 settings.

What's next?

If you did not have an opportunity to assign a password to CallPilotDist in the previous procedure, then go to "Changing pcANYWHERE32 caller passwords" on page 136.

If you have already assigned a password to the CallPilotDist caller account, then continue with Chapter 10, "Verifying that CallPilot can receive calls," on page 137.

Changing pcANYWHERE32 caller passwords

Introduction

To simplify the remote logon process, Nortel Networks recommends that you match the pcANYWHERE32 caller password for CallPilotDist to the Nortel Networks user account password for NGenDist. Therefore, Nortel Networks recommends that you change the pcANYWHERE32 caller CallPilotDist password and the Windows NT NGenDist account password at the same time.

To change passwords

1   Click Start > Programs > pcANYWHERE32 > pcANYWHERE.

    Result: pcANYWHERE32 starts.

2   Select Be a Host PC.

3   Click Network.

    Note: Do not double-click the icon or you begin a pcANYWHERE32 session.

4   From the File menu, choose Properties.

    Result: The Network Properties dialog box appears.

5   Click the Callers tab.

6   Click Specify individual caller privileges.

7   Right-click the CallPilotDist icon. Then select Properties.

8   Click the Settings tab.

9   In the Password box, type a new CallPilotDist password.

10   In the Confirm Password box, type the CallPilotDist password again.

11   Click Apply.

12   Click OK.

13   Click OK to return to the main pcANYWHERE32 window.

14   Exit pcANYWHERE32.

What's next?

Chapter 10

Verifying that CallPilot can receive calls

In this chapter

Overview

Introduction

This chapter provides basic tests of the installation, including

- checking the System Ready Indicators to see if CallPilot is ready to accept calls

- testing the connection to the ELAN

- testing the connection to the CLAN

- verifying that CallPilot can receive calls

Perform these tests before you continue with the installation. A more thorough test that requires the use of the CallPilot Administration Client is described in "Testing your channels" in Part 4 of CallPilot Installation and Configuration.

Checking that CallPilot is ready to accept calls (System Ready Indicator)

ATTENTION   CallPilot services require approximately five to ten minutes after starting up the CallPilot server to become fully operational. CallPilot is not ready to accept calls until the CallPilot services are fully operational.

Introduction

CallPilot uses the following methods to indicate it is ready to accept calls:

- displays messages in dialog boxes on the CallPilot server after logon
- generates events that can be viewed on the CallPilot Administration Client
- displays status using the HEX display (applies only to the 200i and 201i servers)

The system ready indicators described in this section appear when you restart the server, and also when CallPilot is running if a change in system readiness status occurs.

The system ready indicators appear only if the Configuration Wizard has been run on the server. The CallPilot server is not ready to accept calls if the Configuration Wizard has not been run.

To diagnose system ready indicator warnings or errors

If system ready indicator messages indicate an error, view the event log for more information. For detailed instructions on viewing events, refer to the *Monitoring and Security for the Administrator* guide. To further diagnose the problem, refer to Part 5 of this binder.

To check system readiness by observing the dialog box messages

After logon, the following dialog box appears if CallPilot services are not yet fully operational. It can take approximately one minute after logon for this dialog box to appear:
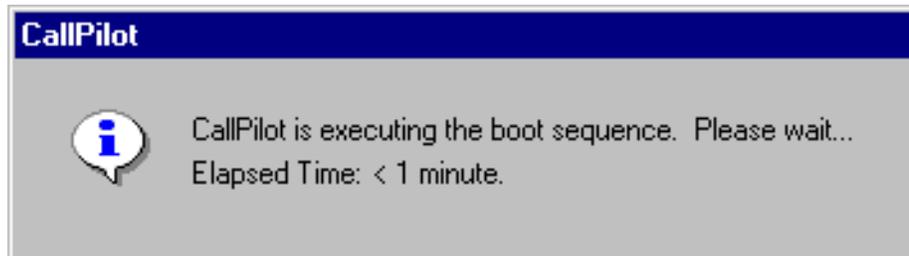
Note: This dialog box might not appear if enough time has passed between starting up the CallPilot server and logging on for CallPilot services to become fully operational. It takes approximately five to ten minutes after starting up the CallPilot server for CallPilot services to become fully operational.

Note: The Elapsed Time indicates how much time has passed since the CallPilot application began its boot sequence.

If the CallPilot start sequence is passed successfully (CallPilot services are fully operational), the following dialog box appears:
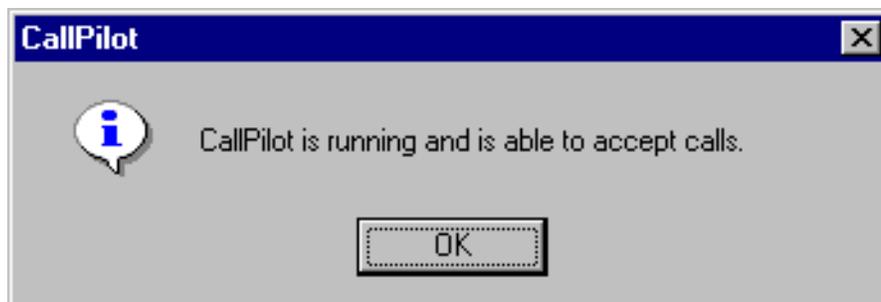
Warning or Error dialog box messages

If there are errors, one of the following two dialog boxes appears (depending on the severity of the problem):

Warning message
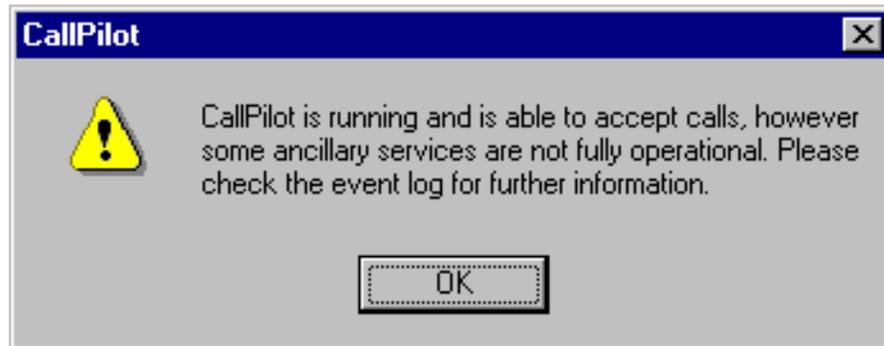
Error message
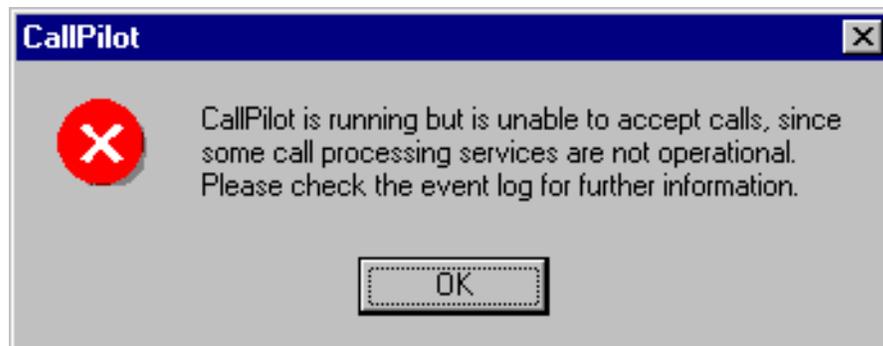
Alternative methods for verifying that CallPilot is ready to accept calls

View event log entries on the administrative PC or in the Windows NT Event Viewer on the server

The Pass, Warning, and Error system ready indicator messages appear as events in the Event Browser and Alarm Monitor (accessible from the administrative PC), and in the Windows NT Event Viewer on the server.

The Event Browser and Alarm Monitor show only the latest 100 events by default (this default can be adjusted), so it is possible for the system ready indicator events to be removed from the Event Browser and Alarm Monitor windows.

For detailed instructions on viewing events, refer to the *Monitoring and Security for the Administrator* guide.

Observe the HEX display (for the 200i or 201i server only)

The HEX display on the 200i or 201i server faceplate displays the following messages:

Note: The DOWN, OK, MIN, MAJ, CRI, and "???" messages can appear regardless of whether the Configuration Wizard has been run. Some MIN, MAJ, and CRI events might appear because the server has not been configured. These events might be resolved after running the Configuration Wizard. The BOOT, PASS, WARN, and FAIL messages are system ready indicator messages; they do not appear if the Configuration Wizard has not been run.

IPE CallPilot server HEX display	Description
DOWN	The operating system is starting.
OK	The operating system start sequence has passed.
BOOT	CallPilot is starting and is not yet fully operational. Please wait.
PASS	CallPilot is fully operational and ready to accept calls.
WARN	CallPilot is ready to accept calls; however, some services failed the start sequence. Check the event log for further information.
FAIL	CallPilot failed the start sequence and cannot accept calls. Check the event log for further information.
MIN	A minor alarm has occurred. Check the event log for further information.
MAJ	A major alarm has occurred. Check the event log for further information.
CRI	A critical alarm has occurred. Check the event log for further information.
???	This indicates that an alarm of unknown severity occurred. This error should not occur on a properly installed system. The severity of this event is treated as higher-than-critical.

Testing the connection to the ELAN

Introduction

This procedure tests the network connection between the server and switch over the ELAN (for Meridian 1 switches only).

To test the connection to the ELAN

1   Click Start > Programs > Command Prompt.

Result: The Command Prompt window appears.

2   Type **ping** followed by the ELAN IP address for the switch, and then press Enter.

Note: Refer to the Configuration Wizard worksheets you completed in Part 1 of this Installation binder for the IP address. This is also the ELAN IP address specified for the switch in "Configuring switch IP addresses and enabling the Ethernet interface" on page 41.

Example: ping 255.255.255.255

Result: The display should indicate a successful ping. If the ping is not successful, check the connection from the CallPilot server ELAN card to the switch.

3   If the CallPilot server is also connected to a CLAN, then continue with "Testing the connection to the CLAN" on page 144.

If the CallPilot server is not connected to a CLAN, then type **exit** and press Enter to close the Command Prompt window. Then continue with "Verifying that CallPilot can receive calls" on page 145.

Testing the connection to the CLAN

Introduction

This procedure tests the network connection between the server and the CLAN. This applies only if CallPilot has a CLAN card and is connected to a CLAN.

To test the connection to the CLAN

1 Click Start > Programs > Command Prompt.

  Result: The Command Prompt window appears.

2 Type **ping** followed by the CLAN IP address of another PC on the CLAN and press Enter.

  Example: ping 255.255.255.255

  Result: The display should indicate a successful ping.

3 Type **exit** and press Enter to close the Command Prompt window.

Verifying that CallPilot can receive calls

Introduction

The following procedure is a basic test to verify that CallPilot is able to receive calls from the switch and answer those calls. A more thorough test that requires the use of the CallPilot Administration Client is described in Part 4 of CallPilot Installation and Configuration, Chapter 4, "Testing your channels."

To verify that CallPilot can receive calls

1   Ensure that CallPilot services are fully operational before you begin. See "Checking that CallPilot is ready to accept calls (System Ready Indicator)" on page 139.

2   Dial the main Voice Messaging DN that you defined in the Configuration Wizard.

3   Listen for a response from CallPilot (for example, "Nortel CallPilot ..."), and then hang up.

If you do not get a response, then do the following:

a.   Check the cabling between the server and the switch.

b.   Verify that the switch is processing calls to other extensions.

c.   Refer to Part 5 of this binder for troubleshooting instructions.

What's next?

Continue with installing the CallPilot client software on the administrative PC (see Part 4 of CallPilot Installation and Configuration).

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CallPilot

Installation and Configuration

Part 3: Meridian 1 Switch Setup and CallPilot Server Configuration

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